

It is further ordered that the findings of the said Trial Examiner shall be, and the same hereby are, vacated except as expressly adopted in the Commission's Findings of Fact and Opinion in this matter this day issued.

By the Commission.

[SEAL]

FRANCIS P. BRASSOR, *Secretary.*

[F. R. Doc. 742—Filed, May 26, 1936; 12:34 p. m.]

Thursday, May 28, 1936

No. 54

## TREASURY DEPARTMENT.

Bureau of Internal Revenue.

[T. D. 4644]

### AMENDING SPECIALLY DENATURED ALCOHOL FORMULAE 25 AND 25-A

To District Supervisors and Others Concerned:

Pursuant to authority conferred by the Act of June 7, 1906 and Title III of the National Prohibition Act, Specially Denatured Alcohol Formulae 25 and 25-A are hereby amended to read as follows effective at once:

#### SPECIALLY DENATURED ALCOHOL FORMULA #25

To every 100 gallons of ethyl alcohol add:

20 pounds of Iodine, U. S. P. and  
15 pounds of Potassium Iodide, U. S. P. or  
15 pounds of Sodium Iodide, U. S. P.

#### SPECIALLY DENATURED ALCOHOL FORMULA #25-A

To every 100 gallons of ethyl alcohol add:

A solution composed of 20 pounds of Iodine, U. S. P.  
15 pounds of Potassium Iodide, U. S. P. or  
15 pounds of Sodium Iodide, U. S. P. and  
15 pounds of water.

[SEAL]

GUY T. HELVERING,  
*Commissioner of Internal Revenue.*

Approved: May 25, 1936.

WAYNE C. TAYLOR,  
*Acting Secretary of the Treasury.*

[F. R. Doc. 752—Filed, May 27, 1936; 11:58 a. m.]

[T. D. 4645]

### TAXES ON CERTAIN FIREARMS AND MACHINE GUNS

#### ARTICLE 20 OF REGULATIONS 88, APPROVED AUGUST 17, 1934, AMENDED

To Collectors of Internal Revenue and Others Concerned:

Regulations 88 are amended to give effect to the provisions of Public, No. 490, 74th Congress, approved April 10, 1936.<sup>1</sup>

Preceding article 20, and following section 1 (k) there shall be inserted the following:

Section 1 (a) of the National Firearms Act approved June 26, 1934, amended by Public, No. 490, 74th Congress, Approved April 10, 1936.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That subsection (a) of section 1 of the National Firearms Act relating to the definition of "firearms" is amended by inserting after "definition" a comma and the following: "but does not include any rifle which is within the foregoing provisions solely by reason of the length of its barrel if the caliber of such rifle is .22 or smaller and if its barrel is sixteen inches or more in length."

Pursuant to the foregoing provisions of law article 20 (a) of Regulations 88 is amended to read as follows:

(a) The terms defined in the above provisions of law shall have the meanings so assigned to them, and the definition of "firearms" contained in subsection (a) above does not include any rifle having a caliber of .22 or smaller if the length of its barrel is sixteen inches or more.

<sup>1</sup> 49 Stat. 1192.

This document is issued under the authority contained in section 12 of the National Firearms Act.

[SEAL]

GUY T. HELVERING,  
*Commissioner of Internal Revenue.*

Approved: May 25, 1936.

WAYNE C. TAYLOR,  
*Acting Secretary of the Treasury.*

[F. R. Doc. 753—Filed, May 27, 1936; 11:59 a. m.]

## DEPARTMENT OF AGRICULTURE.

Bureau of Animal Industry.

### AMENDMENT 1 TO RULE 1, REVISION 34—TO PREVENT THE SPREAD OF SPLENETIC OR TICK FEVER IN CATTLE—RELEASING FROM QUARANTINE THAT PART KNOWN AS THE MAINLAND OF GALVESTON COUNTY, TEXAS

[Amendment 1 to B. A. I. Order 353]

EFFECTIVE ON AND AFTER JUNE 1, 1936

The fact has been determined by the Secretary of Agriculture and notice is hereby given that the contagious and infectious disease known as splenetic or tick fever no longer exists in cattle in Galveston County, Texas, with the exception of that part known as the Galveston peninsula, which joins Chambers County, Texas.

Now, therefore I, M. L. Wilson, Acting Secretary of Agriculture, under authority conferred by law, do hereby revoke the quarantine heretofore established in Galveston County, Texas, on that part known as the mainland, which is bounded by Brazoria and Harris counties and Galveston Bay and West Bay, by B. A. I. Order 358, issued on November 9, 1935, and effective December 1, 1935, said revocation to take effect on June 1, 1936, and said B. A. I. Order 358 is hereby amended accordingly.

This amendment, for purposes of identification, is designated as Amendment 1 to B. A. I. Order 358.

Done in the City of Washington this 27th day of May 1936. Witness my hand and the seal of the Department of Agriculture.

[SEAL]

M. L. WILSON,  
*Acting Secretary of Agriculture.*

[F. R. Doc. 754—Filed, May 27, 1936; 12:00 m.]

## DEPARTMENT OF COMMERCE.

Bureau of Navigation and Steamboat Inspection.<sup>2</sup>

### NOTICE OF HEARING WITH REGARD TO THE PROMULGATION OF RULES AND REGULATIONS GOVERNING TANK VESSELS

MAY 26, 1936.

Notice is hereby given of a public hearing, to be held by the Bureau of Navigation and Steamboat Inspection, in the Auditorium of the Department of Commerce, 14th and Constitution Avenue NW., Washington, D. C., commencing at 10:00 o'clock in the morning of Monday, June 29, 1936, and continuing from day to day thereafter until the hearing shall have been concluded, upon the question of the promulgation, pursuant to the authority contained in Public 343—74th Congress, Title 52, Revised Statutes, and other laws regulating vessels of the United States and other statutory authority, of rules and regulations governing all Tank Vessels.

A tentative draft of proposed rules and regulations governing the subject is set forth below and the purpose of the hearing is to obtain the views of all interested therein so as to aid the Bureau, in making appropriate recommendations to the Secretary of Commerce as to the sort of rules and regulations which ultimately should be adopted. It is to be understood

<sup>2</sup> Changed to "Bureau of Marine Inspection and Navigation" (49 Stat. 1380).

that the rules and regulations set forth below are purely tentative and that any or all of the said rules and regulations may be deleted, revised, amended, or altered and, also, that such rules and regulations as may be recommended to the Secretary for adoption, as a result of the hearing, are subject to the approval of the Secretary and shall become effective only upon his approval.

It will be expected that appearances will be for an amendment by addition, revision, or elimination of a specific section or sections. Mere generalities will not be acceptable. Before any discussion is undertaken, there must be handed the Director in triplicate a statement for each such proposal in the form set forth below:

#### SUGGESTED RULES FOR TANK VESSELS

Proposed	(Addition Amendment Deletion)	Presented at public hearing, Washington, D. C., June 29, 1936, by John Doe, representing The Doe Refining Company, address 123 South Street, Bath, Maine
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1. Suggested re-wording of Item No. II-4-2, Page No. ----, Section No. II-4, Rule No. II.
2. Submitted by The Doe Refining Company, 123 South Street, Bath, Maine.
3. Present wording of Item II-4-2 Cargo Tanks—Existing Wood Hull Vessels.

*Cargo tanks shall be independent of the wood hull, shall be made of steel or iron, and shall be at least equivalent to the requirements of a recognized classification society. Where cargo tanks in wood hulls are not arranged to provide working spaces around them they shall be so constructed as to allow inspection of the hull, tanks, and bilges, and they shall be so installed that they can be raised to allow repairs to the hull structure and to themselves.*

4. Suggested re-wording of Item:

*Add the following: "Except on tank barges used exclusively in the transportation of Grade E liquids."*

5. Item as re-worded: (Set out in full.)

6. Brief statement of reason for re-wording suggested:

NOTE.—This is a partially completed sample form. Each item should be answered. The italic statements, above, are merely indications of what might properly be set out in the blank spaces.

The proceedings will be recorded in full. Those wishing to procure the record or any part thereof must make arrangements with the reporter during the session. Copies will not be distributed gratuitously as no funds have been provided for this purpose.

The tentative rules and regulations upon which the views of those interested are invited are as follows:

#### RULES FOR TANK VESSELS

##### RULE I

##### [Outline of Sections]

##### Introduction

1. Basis and Application of Rules.
2. Division of Rules and Designations of their Application.
3. Definition of Terms.

##### Inspection and Certification For Tank Vessels

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|---------|---|
| SECTION | I-1. General.   |
|         | I-1-1. Authority for Regulations.   |
|         | I-1-2. Source of Regulations.   |
|         | I-1-3. Penalties for Violations.  |
|         | I-1-4. Effective date of Regulations.   |
|         | I-1-5. Time Allowance for Changes in Existing Tank Vessels.                     |
|         | I-1-6. Owners Right of Appeal.  |
| SECTION | I-2. Certificates of Inspection.  |
|         | I-2-1. Application for Certificates of Inspection of New Vessels.               |
|         | I-2-2. Application for Certificates of Inspection of all Existing Tank Vessels. |
|         | I-2-3. Period Covered by Certificate of Inspection.                             |
|         | I-2-4. Both Inspectors to Sign Certificates of Inspection.                      |
| SECTION | I-3. Inspection of Tank Vessels.  |
|         | I-3-1. Authority.   |
|         | I-3-2. American Bureau of Shipping.   |
|         | I-3-3. Inspection of New Tank Vessels.  |
|         | I-3-4. Inspection of Existing Tank Vessels.                                     |
|         | I-3-5. Vessels Converted to Tank Vessels.                                       |
|         | I-3-6. Annual Inspection.   |
|         | I-3-7. Drydock Inspection.  |
|         | I-3-8. Special Inspections.   |

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|---------|---|
| SECTION | I-4. Manning of Tank Vessels.   |
|         | I-4-1. Licensed Officers and Crew.  |
|         | I-4-2. Unmanned Tank Barges.  |
|         | I-4-3. Towing Vessels May Carry Persons in Addition to Crew.  |
|         | I-4-4. Right of Appeal.   |
| SECTION | I-5. Waterways Operated Over.   |
|         | I-5-1. Waterways.   |
| SECTION | I-6. General Inspection Reports and Procedure.  |
|         | I-6-1. Annual Reports of Inspectors.  |
|         | I-6-2. Accident Reports of Inspectors.  |
|         | I-6-3. Notice of Revocation or Suspension of Licenses and Certificates.   |
|         | I-6-4. Inspectors Not to Accept Statements.   |
| SECTION | I-7. Load Lines.  |
|         | I-7-1. Tank Vessels Subject to Regulations for Establishment of Load Lines.   |
| SECTION | I-8. Specifications; Boilers, Pressure Vessels, and Piping Systems.   |
|         | I-8-1. Tank Vessels Subject to Rules I and II of General Rules and Regulations, prescribed by Board of Supervising Inspectors, wherever applicable. |
| SECTION | I-9. Appendices:  |
|         | I-9-1. Appendices A, B, and C a part of these rules.  |

#### RULES FOR TANK VESSELS

##### RULE I

##### Introduction

1. Basis and Application of Rules.

These rules govern the regulation and inspection of all tank vessels, which are subject to regulation and/or inspection under the provisions of laws administered by the Bureau of Navigation and Steamboat Inspection.

2. Division of Rules and Designations of Their Application.

(a) The rules are in five major divisions, and specifications are in the Appendices, viz:

- Rule I—Inspection and Certification for Tank Vessels.
- Rule II—Hulls, Machinery, and Equipment for Tank Vessels.
- Rule III—Life-Saving Appliances for Tank Vessels.
- Rule IV—Fire-Fighting Equipment for Tank Vessels.
- Rule V—Operation of Tank Vessels.
- Appendix "A"—Rules of Practice in Investigations and Trials.
- Appendix "B"—Licensed Officers and Certificated Men.
- Appendix "C"—Specifications: Life-Saving Appliances.

(b) The vessels and services to which each item of the rules applies are indicated by letters in the left-hand margin opposite the item number, for example.

1. TB/ALL signifies an item applicable to both tank ships and tank barges in all waters.
2. T/OC signifies an item applicable only to tank ships in ocean and coastwise service.
3. B/R signifies an item applicable only to tank barges in river service.
4. T/RB signifies an item applicable only to tank ships in service on rivers, bays, sounds, and lakes other than the Great Lakes.
5. B/L signifies an item applicable only to tank barges on the Great Lakes.

3. Definition of Terms.

Certain terms used in these rules are defined as follows:

- (a) Approved: The term "approved" means approved by the Department of Commerce.
- (b) Board: The term "Board" means the Board of Supervising Inspectors of the Bureau of Navigation and Steamboat Inspection.
- (c) Bureau: The term "Bureau" means the Bureau of Navigation and Steamboat Inspection.
- (d) Cargo: (See "Inflammable Liquid" and "Combustible Liquid.")
- (e) Certificated: The term "certificated", when applied to tank vessels, refers to a vessel covered by a certificate of inspection issued by the Bureau of Navigation and Steamboat Inspection; when applied to men employed on tank vessels, refers to a certificate of ability issued under authority of the Secretary in accordance with the requirements of these regulations.

(f) **Classification Requirements:** The term "Classification Requirements" means applicable rules and supplementary requirements of the American Bureau of Shipping, or other recognized Classification Society.

(g) **Coastwise:** Under this designation shall be included all tank vessels navigating the waters of any ocean or the Gulf of Mexico, 20 nautical miles or less off shore.

(h) **Cofferdam:** A cofferdam is a space, having a width sufficient for ready access, with tight bulkheads on both sides. In these rules, any one of several spaces shall be considered to be equivalent to a cofferdam, as follows:

1. A cargo pump room.
2. A tank, either empty or used to carry a liquid having a flash-point of 150° F., or above.
3. A horizontal air space, either enclosed and vented or open to the atmosphere.

(i) **Combustible liquid:** A combustible liquid is any liquid having a flash-point above 80° F. (as determined from Tagliabue's open-cup tester, as used for test of burning oils). In these rules, combustible liquids are referred to by grades, as follows:

Grade D—A combustible liquid having a flash-point below 150° F. and above 80° F.

Grade E—A combustible liquid having a flash-point of 150° F. or above.

(j) **Director:** The term "Director" means the Director of the Bureau of Navigation and Steamboat Inspection.

(k) **Existing Tank Vessel:** An "existing tank vessel" is any tank vessel, the construction of which was started prior to \_\_\_\_\_, and shall include any vessel the conversion of which into a tank vessel was started prior to \_\_\_\_\_.

(l) **Flame arrester:** The term "flame arrester" means any device or assembly of a cellular, tubular, pressure, or other type and of a size approved for preventing the passage of flames into enclosed spaces.

(m) **Flame Screen:** The term "flame screen" means a single screen of corrosion-resistant wire of at least 30 x 30 mesh, or two screens, both of corrosion-resistant wire, of at least 20 x 20 mesh, spaced not less than 1/2 or more than 1 1/2 inches apart.

(n) **Flash Point:** The term "flash point" indicates the temperature in degrees Fahrenheit at which a liquid gives off an inflammable vapor when heated in a Tagliabue open-cup tester. For the purpose of these Regulations, flash points determined by other testing methods will be equivalent to those determined with the Tagliabue open-cup tester, as follows:

*Equivalent Flash Points*

Tagliabue Open Cup Tester	Tagliabue Closed Cup Tester (A. S. T. M. D-59-21)	Pensky- Martens Closed Tester (A. S. T. M. D-33-22)
Degrees Fahr. 80 150	Degrees Fahr. 75 -----	Degrees Fahr. ----- 140

(o) **Gas Free:** The term "gas free" means free from dangerous concentrations of inflammable or toxic gases.

(p) **General Rules and Regulations:** The term "General Rules and Regulations" means the General Rules and Regulations prescribed by the board of supervising inspectors of the Bureau of Navigation and Steamboat Inspection.

(q) **Great Lakes:** Under this designation shall be included all tank vessels navigating the Great Lakes.

(r) **Inflammable Liquid:** An inflammable liquid is any liquid which gives off inflammable vapors (as determined by flash point from Tagliabue's open-cup tester, as used for test of burning oils) at or below a temperature of 80° F. In these rules, inflammable liquids are referred to by grades, as follows:

Grade A—Any inflammable liquid having a Reid Vapor Pressure of 14 pounds or more.

Grade B—Any inflammable liquid having a Reid Vapor Pressure under 14 pounds and over 8 1/2 pounds.

Grade C—Any inflammable liquid having a Reid Vapor Pressure of 8 1/2 pounds or less and a flash point of 80° F. or below.

(s) **Lakes, Bays, and Sounds:** Under this designation shall be included all tank vessels navigating the waters of any of the lakes, bays, or sounds other than the waters of the Great Lakes.

(t) **Inspector:** The term "inspector" means a local or other inspector duly designated by the Bureau.

(u) **New Tank Vessels:** A "new tank vessel" is any tank vessel the construction of which is started on or after and shall include any vessel the conversion of which into a tank vessel was started on or after \_\_\_\_\_.

(v) **Ocean:** Under this designation shall be included all tank vessels navigating the waters of any ocean or the Gulf of Mexico more than 20 nautical miles off shore.

(w) **Permit:** The term "permit" refers to an endorsement on the certificate of inspection authorizing the presence on board of liquid cargoes issued by a local board of inspectors to a tank vessel which is found to be in substantial compliance with these Regulations.

(x) **Pilot Rules:** The term "pilot rules" means the current edition or revision of Pilot Rules as issued by the Bureau of Navigation and Steamboat Inspection in three parts, namely (1) Pilot Rules for Certain Inland Waters of the Atlantic and Pacific Coasts and of the coast of the Gulf of Mexico, (2) Pilot Rules for the Great Lakes and their connecting and tributary waters, and (3) Pilot Rules for rivers whose waters flow into the Gulf of Mexico and their tributaries and the Red River of the North.

(y) **Pressure-Vacuum Relief Valve:** The term "pressure-vacuum relief valve" means any device or assembly of a mechanical, liquid, weight, or other type and of a size approved for the automatic regulation of pressure in enclosed spaces.

(z) **Recognized Classification Society:** The term "recognized classification society" means the American Bureau of Shipping or other Classification Society recognized by the Bureau.

(aa) **Reid Vapor Pressure:** Reid Vapor Pressure is the vapor pressure of a liquid at a temperature of 100° F. expressed in pounds per square inch absolute as determined by the "Reid Method" as described in Technical Method D-323-32T of the American Society for Testing Materials.

(bb) **Rivers:** Under this designation shall be included all tank vessels whose navigation is restricted to rivers and/or to canals exclusively.

(cc) **Secretary:** The term "Secretary" means the Secretary of Commerce.

(dd) **Spark Arrester:** The term "spark arrester" means any device, assembly, or method of a mechanical, centrifugal, cooling, or other type and of a size approved for the retention or quenching of sparks in exhaust pipes from internal combustion engines.

(ee) **Supervising Inspector:** The term "supervising inspector" means a supervising inspector of the Bureau of Navigation and Steamboat Inspection.

(ff) **Tank Barge:** A "tank barge" is any tank vessel not equipped with means of self-propulsion.

(gg) **Tank Ship:** A "tank ship" is any tank vessel propelled by power or sail.

(hh) **Tank Vessels:** A "tank vessel" is any vessel especially constructed or converted to carry liquid bulk cargo in tanks.

#### *Inspection and Certificates for Tank Vessels*

##### **SECTION I-1. GENERAL**

##### **I-1-1. Authority for Regulations.**

TB/ALL (a) Every tank vessel shall be inspected to see that its hull, boilers, machinery, apparatus for stowage, and appliances comply with law and these regulations. If such vessel is found to comply with law and these regulations, a certificate of inspection shall be issued to it, or to its owners,

by the local inspectors of the Bureau of Navigation and Steamboat Inspection.

TB/ALL (b) Certificates of inspection for tank vessels shall be identical in form to certificates issued to other cargo vessels, and in addition to the manning requirements and waters which may be operated over, they shall be indorsed "Inspected and approved for the carriage of inflammable or combustible liquids of Grade A, B, C, D, or E" (as the case may be), and such indorsement shall serve as a permit for such vessel to operate.

TB/ALL (c) The certificate of inspection shall be verified by the oaths of both of the inspectors signing it, before the chief officer of the customs of the district or by any other person competent by law to administer oaths. Such certificate shall be delivered to the master or owner of the tank vessel to which it relates and shall be framed under glass and posted in a conspicuous part of the vessel: *Provided, however*, That where it is not practicable so to expose said certificate, it shall be carried in the vessel in such a manner as prescribed by regulations.

#### I-1-2. Source of Regulations.

TB/ALL The Secretary of Commerce is authorized and directed to promulgate rules and regulations concerning construction, the appliances, and apparatus for stowage, of vessels used in the transportation of inflammable or combustible liquids in bulk in order to preserve life and property.

#### I-1-3. Penalties for Violations.

TB/ALL (a) Certificates of inspection for tank vessels may be revoked or suspended by the Bureau of Navigation and Steamboat Inspection where such process is authorized by law.

#### I-1-4. Effective Date of Regulations.

TB/ALL These regulations shall become effective on and after

#### I-1-5. Time Allowance for Changes in Existing Tank Vessels.

TB/ALL After the initial inspection of an existing tank vessel by the local inspectors to determine whether such vessel complies with these regulations the inspectors shall furnish the owner or master, in writing, a list of the changes, if any, required to be made to the vessel in order that it may comply with the requirements of these regulations, and a period of not to exceed one year may be allowed such owner to make such changes, not previously required by regulations of the Bureau, after which the vessel shall be reinspected. Until such reinspection is made, such vessels shall be permitted to operate under a temporary certificate of inspection and permit which will not restrict its use for the transportation of liquid inflammable or combustible cargoes in bulk.

#### I-1-6. Owners' Right of Appeal.

TB/ALL Whenever any person directly interested in or affected by any decision or action of any board of local inspectors of vessels shall feel aggrieved by such decision or action, he may appeal therefrom to the supervising inspector of the district, and a like appeal shall be allowed from any decision or action of a supervising inspector to the Director whose decision when approved by the Secretary of Commerce shall be final: *Provided, however*, That application for such re-examination of the case by a supervising inspector or by the Director shall be made within thirty days after the decision or action appealed from shall have been rendered or taken.

### SECTION I-2. CERTIFICATES OF INSPECTION

#### I-2-1. Application for Certificate of Inspection of New Vessels.

TB/ALL Prior to the commencement of the construction of any new tank vessel, or prior to the commencement of the conversion of any vessel to a tank vessel, application for the approval of contract plans and specifications and for a certificate of inspection shall be made in writing to the Bureau of Navigation and Steamboat Inspection and no such construction or conversion shall be proceeded with until such approval is granted. (See I-3-3.)

#### I-2-2. Application for Certificate of Inspection of All Existing Tank Vessels.

TB/ALL Application for a certificate of inspection for an existing tank vessel, endorsed as a permit for the transportation of inflammable or combustible liquids in bulk shall be made in writing to the local inspectors of the district in which the tank vessel operates within 30 days after the date of approval of these regulations.

#### I-2-3. Period Covered by Certificate of Inspection.

TB/ALL Certificates of inspection for any period less than one year shall not be issued.

#### I-2-4. Both inspectors to Sign Certificates of Inspection.

TB/ALL Certificates of inspection shall be signed by both local inspectors, or by a supervising inspector, as provided in Section 4409 of the Revised Statutes.

### SECTION I-3. INSPECTION OF TANK VESSELS

#### I-3-1. Authority.

TB/ALL Inspectors may at any time lawfully inspect any tank vessel within their respective districts.

#### I-3-2. American Bureau of Shipping.

TB/ALL (a) In the inspection of hulls, boilers, and machinery of vessels, the rules promulgated by the American Bureau of Shipping respecting material and construction of hulls, boilers, and machinery, and the certificate of classification referring thereto, except where otherwise provided for by these rules and regulations, shall be accepted as standard by the inspectors of this Bureau.

TB/ALL (b) The approved plans and certificate of the American Bureau of Shipping classed vessels may be accepted by the Bureau or its inspectors as evidence of the structural efficiency of the hull and reliability of machinery of vessels subject to these regulations, except as far as existing law or these regulations place definite responsibility on the Bureau or its inspectors.

#### I-3-3. Inspection of New Tank Vessels.

TB/ALL (a) *Plans*.—Triplicate copies of contract plans and specifications shall be submitted to the local inspectors having jurisdiction, and if the tank vessel is to be classed, such plans and specifications shall first be approved by the recognized classification society. Two copies of such plans and specifications shall be forwarded by the local inspectors to the Bureau for its approval. Such plans and specifications shall be promptly reviewed by the Bureau and if found to be in substantial agreement with these regulations, they shall be marked "Approved", and dated and signed by the Bureau, and one set shall be returned to the owner or builder. If such plans or specifications are not approved, the Bureau shall notify the owner or builder promptly wherein they fail to comply with these regulations.

TB/ALL (b) *Inspection*.—During construction and upon completion of each tank vessel, it shall be inspected by the local inspectors to determine whether it has been built in accordance with the approved plans and specifications, and if so, a certificate of inspection endorsed as a permit for the carriage of inflammable or combustible liquids in bulk for the proper grade or grades of cargo shall be issued to the vessel or its owner.

TB/ALL (c) *Certificate of Class may be accepted*.—In the event such tank vessel is classed by the American Bureau of Shipping, the approved plans and certificates of the American Bureau of Shipping may be accepted by the Bureau or its inspectors as evidence in lieu of Section I-3-3 (b) as to structural efficiency of the hull and reliability of machinery, except in cases where existing law or these regulations place definite responsibility on the Bureau or its inspectors.

#### I-3-4. First Inspection of Existing Tank Vessels.

TB/ALL (a) *Certificate of Class may be accepted*.—If the tank vessel has been classed and maintained to class with the American Bureau of Shipping, the approved plans and certificates of the American Bureau of Shipping may be accepted by the Bureau or its inspectors as evidence of the structural efficiency of the hull and reliability of machinery

of such vessel, except as far as existing law or these regulations place definite responsibility on the Bureau or its inspectors.

**TB/ALL (b) If not classed or maintained in class.**—If the tank vessel has not been classed or if classed, and has not been maintained in class, it shall be freed of gas and sediment and, if deemed necessary by the local inspectors, shall be placed in drydock or on a slipway. The vessel shall be inspected both internally and externally by the local inspectors. If found necessary, it shall be modified, altered, or reconstructed to conform as nearly as is reasonable and practicable to these regulations.

**TB/ALL (c) Certificate of Inspection of Existing Tank Vessels.**—When it has been determined by the local inspectors that any existing tank vessel is in reasonable compliance with these regulations, or when any tank vessel not originally in compliance with these regulations is modified, altered, or reconstructed to conform in a reasonable and practical way to these regulations; then such tank vessel shall be issued certificates of inspection endorsed as a permit for the carriage of inflammable and/or combustible liquids in bulk and for the proper grade or grades of such cargo.

#### I-3-5. Vessels Converted to Tank Vessels.

**TB/ALL** The procedure for the inspection of vessels converted to tank vessels shall conform to the inspection for new tank vessels as called for in I-3-3, and such vessels shall comply with the requirements of inspection for converted vessels as set forth in these regulations.

#### I-3-6. Annual Inspection.

**TB/ALL (a)** The local inspectors shall once in every year, at least, carefully inspect each tank vessel within their respective districts, and shall satisfy themselves that every such vessel so inspected is of a structure suitable for the carriage of inflammable and/or combustible liquids in bulk and for the proper grade or grades of such cargo in the service in which she is employed; and if they deem it expedient, they may direct the vessel to be put in motion, and may adopt any other suitable means to test her sufficiency and that of her equipment.

**TB/ALL (b)** If such inspection reveals deficiencies in maintenance as called for by these regulations, such necessary repairs or improvements shall be made.

**TB/ALL (c)** The annual inspection of all tank vessels shall be made only on written application, presented to the local inspectors by the owner, master, or authorized agent of the vessel to be inspected. Such application shall state upon its face that previous application for inspection has not been made to any other board of local inspectors or supervising inspectors.

#### I-3-7. Drydock Inspection.

**TB/ALL (a)** Whenever any tank vessel is placed upon the dock for repairs, it shall be the duty of the master, owner, or agent to report the same to the board of local inspectors of that district, so that a thorough inspection may be made by them to determine what is necessary to make such vessel seaworthy and come within the provisions of these regulations, if the condition or age of the vessel, in the judgment of the inspectors, renders such examination necessary.

**TB/ALL (b)** All tank vessels, other than those used in fresh water service exclusively, shall be placed in drydock, or on a slipway, or shall be hauled out for examination at least once each calendar year: *Provided, however,* That if it is impracticable to comply with this requirement because a vessel is either on a voyage or is tied up, such a vessel shall be placed in drydock, or on a slipway, or hauled out for examination at the completion of the voyage or before being placed in service.

**TB/Fresh water (c)** All tank vessels used in fresh water service exclusively shall be placed in drydock, or on a slipway, or shall be hauled out for examination at least once in every four calendar years.

**TB/ALL (d)** At such dockings, the vessel may be inspected and shall be repaired as found necessary: *Provided, however,* That the requirements of drydock inspections may not apply

to tank vessels classed and maintained in class with the recognized classification society.

#### I-3-8. Special Inspections.

**TB/ALL (a) Repairs and Alterations Involving Safety.** No extensive alterations involving the safety of a tank vessel either in regard to hull or machinery shall be made without the approval of the Bureau. Before such alterations are carried out, copies of drawings and specifications, in triplicate, for the work involved shall be forwarded to the local inspectors for submission to the Bureau for approval, and if approval is given, one set of said plans and specifications, properly approved and dated, shall be returned to the owner or to the repair yard designated by the owner. If such plans and specifications are not approved, the Bureau shall promptly notify the owner or designated shipyard wherein they fail to comply with these regulations.

No extensive repairs to hull or machinery which affect the safety of a vessel shall be made without the knowledge of the local inspectors.

**TB/ALL (b) For Stability:** When the local inspectors have any reason to question the stability of any tank vessel under their jurisdiction, they shall require the owners of the tank vessel to make inclining tests of such vessel.

**TB/ALL (c) To Proceed to Other Ports for Repairs:** Local inspectors issuing a permit to any tank vessel to proceed to other ports for repairs shall state upon the face of the same the conditions upon which it is granted and whether the tank vessel is to be allowed to carry cargo and the quantity of cargo: *Provided,* That no tank vessel whose certificate has expired shall be permitted to carry cargo while enroute to another port for repairs.

When tank vessels obtain a permit from the local inspectors of a district to go from their district to another to make repairs, said local inspectors shall notify the supervising inspector of their district, stating the repairs to be made on said tank vessel. The supervising inspector shall notify the supervising inspector of the district where such repairs are to be made, furnishing him a copy of the report of the inspectors indicating the repairs ordered on said tank vessel.

**TB/ALL (d) For Trial Trips:** On the trial trip of each new or converted tank ship, an inspector shall be present to observe from the standpoint of safety in the carriage of inflammable and/or combustible liquids in bulk the operation of boilers, engines, steering gear, and auxiliaries; and if not satisfied with the performance of such boilers and machinery, appliances, and apparatus for stowage, he shall make such requirements as in his judgment will overcome any deficiencies which may have come under his observation.

### SECTION I-4. MANNING OF TANK VESSELS

#### I-4-1. Licensed Officers and Crew.

**TB/ALL (a)** The local inspectors shall make in the certificate of inspection of each tank vessel an entry of such complement of officers and/or crew, including certificated lifeboat men (and certificated special cargo men-tank vessel where required by these regulations), separately stated, which in the judgment of the local inspectors who inspect the vessel will be necessary for her safe operation. The complement may be changed from time to time by endorsement on such certificate by local inspectors by reason of change of conditions or employment.

**TB/ALL (b)** Every tank vessel not required by law to be commanded by a licensed officer, except an unmanned tank barge, shall be commanded by a person who is either a licensed officer or a special cargo man-tank vessels: *Provided,* That no certificated special cargo man-tank vessels may command a self-propelled tank vessel unless he is thoroughly familiar with the pilot rules and that fact is endorsed upon his certificate. Every tank vessel having a complement of three or more men shall have in her service at least two persons who are either licensed officers or special cargo man-tank vessels.

#### I-4-2. Unmanned Tank Barges.

**B/R** If tank barges operating in inland waters tributary to the Gulf of Mexico be operated in flotilla, being in actual physical contact with each other and/or the towing vessel



and at all times being accessible from the towing vessel, separate crews for each barge need not be carried: *Provided, however*, That a sufficient number of the regular complement of the towing vessel have certificates as special cargo man-tank vessels so as to provide at least one such special cargo man-tank vessels on each watch.

#### I-4-3. Towing Vessels May Carry Persons in Addition to Crew.

B/L. B. R. (a) Towing vessels engaged in towing tank barges on the Great Lakes and other inland waters may be authorized by the supervising inspector of the district to carry on board such number of persons in addition to its crew as shall be deemed necessary to carry on the legitimate business of such towing vessel, not exceeding, however, one person to every net ton of the towing vessel.

B/L. B. R. (b) Supervising inspectors granting license to a vessel engaged in towing to carry persons in addition to its crew, shall notify the local inspectors in whose jurisdiction the vessel receiving the permit is engaged, and the local inspectors shall keep a record of the same.

#### I-4-4. Right of Appeal.

TB/ALL The decision of the local inspectors as to the manning of any tank vessel shall be subject to a right of appeal in the same manner as prescribed in paragraph I-1-6.

### SECTION I-5. WATERWAYS OPERATED OVER

#### I-5-1. Waterways.

TB/ALL The certificate of inspection shall show the waterways over which the tank vessel is permitted to operate.

### SECTION I-6. GENERAL INSPECTION REPORTS AND PROCEDURE

#### I-6-1. Annual Reports of Inspectors.

TB/ALL Local Inspectors shall report for each fiscal year, as soon as practicable after the end of each fiscal year, to their supervising inspectors, all vessels inspected, arranged according to class and grade; all examinations into alleged violations of the laws regulating vessels, and the action taken in relation to the same; all investigations and decisions by local inspectors; all cases of appeal and the result thereof; casualties and investigations of same; the names of all persons licensed or certified; the names of all whose licenses or certificates have been suspended or revoked; the names of all persons from whom licenses or certificates have been withheld; and shall render all other annual reports required by the regulations of the Department. These reports, together with any other annual reports that may be submitted by supervising and local inspectors, shall be forwarded by supervising inspectors to the Director.

No supervising inspector shall make his annual report public until after the same has been printed and made public by the department; and, further, no local board, or the clerk thereof, shall make public any report without the consent of their supervising inspector or that of the Director.

#### I-6-2. Accident Reports of Inspectors.

TB/ALL Local boards shall report forthwith to their supervising inspectors in detail all accidents of a serious character, such as collisions, foundering, sinkings, fires, and all other casualties of interest to or affecting the Bureau of Navigation and Steamboat Inspection in their respective districts.

#### I-6-3. Adjoining Districts to be Notified of Revocations or Suspensions of Licenses, and Certificates.

TB/ALL It shall be the duty of local inspectors to notify the local inspectors of adjoining districts, through the supervising inspector, of all revocations or suspensions of licenses and certificates, and also of the names of all persons from whom licenses or certificates have been withheld, the names of all vessels neglecting or refusing to make repairs when ordered, and the names of all that have been refused certificates, with the reasons therefor.

#### I-6-4. Inspectors Not to Accept Statements.

TB/ALL Inspectors shall be guided by conditions as actually found by them and in no case shall they be justified in accepting the statements of others.

### SECTION I-7. LOAD LINES

#### I-7-1. Establishment of Load Lines.

TB/ALL All tank vessels are subject to the applicable regulations of the Secretary of Commerce for the establishment of load lines.

### SECTION I-8. SPECIFICATIONS—BOILERS, PRESSURE VESSELS, AND PIPING SYSTEMS

#### I-8-1. Rules I and II, prescribed by Board of Supervising Inspectors.

All tank vessels are subject to Rules I and II as prescribed by the board of supervising inspectors and approved by the Secretary of Commerce, wherever applicable, and with such exceptions as are set forth in these rules for tank vessels.

### SECTION I-9. APPENDICES

#### I-9-1. Appendices A, B, and C are attached to and made a part of these rules for tank vessels.

### RULES FOR TANK VESSELS

#### RULE IX

#### [Outline of Sections]

#### Hulls, Machinery, and Equipment for Tank Vessels

#### SECTION II-1. Hulls and Hull Fittings—General.

- II-1-1. Inspection of Hulls.
- II-1-2. Means of Escape.
- II-1-3. Name of Vessel.
- II-1-4. Draft Marks of Vessel.
- II-1-5. Hull Fittings.

#### SECTION II-2. Hull Requirements—New Tank Vessels.

- II-2-1. Scantlings, Material, Workmanship.
- II-2-2. Subdivision of Cargo Space.
- II-2-3. Cofferdams.
- II-2-4. Pump Rooms.
- II-2-5. Living Quarters.
- II-2-6. Vessels with Independent Tanks.
- II-2-7. Testing of Cargo Tanks and Bulkheads.

#### SECTION II-3. Hull Requirements—Existing Steel Hull Tank Vessels.

- II-3-1. Hull Requirements—General.
- II-3-2. Cofferdams—Existing Tank Vessels.
- II-3-3. Pump Rooms—Existing Tank Vessels.
- II-3-4. Pump Engine Compartment—Existing Steel Tank Vessels.

#### SECTION II-4. Hull Requirements—Existing Wood Hull Tank Vessels.

- II-4-1. Hull Requirements—General.
- II-4-2. Cargo Tanks.
- II-4-3. Electric Bonding and Grounding of Tanks.
- II-4-4. Hold Spaces and Bulkheads.

#### SECTION II-5. Boilers and Machinery.

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- II-5-2. Tests and Inspection.
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- II-5-7. International Combustion Engine Exhausts.
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- II-6-1. In Pump Rooms of New Vessels.
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- II-8-3. Cargo Pumps—Existing Wood Hull Vessels.
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- SECTION II-9. Equipment and Miscellaneous.  
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#### RULES FOR TANK VESSELS

##### RULE II

#### Requirements for Hulls, Machinery, and Equipment

##### SECTION II-1. HULLS AND HULL FITTINGS—GENERAL

###### II-1-1. Inspection of Hulls.

TB/ALL In the inspection of hulls of tank vessels, the inspector of hulls shall carefully inspect every accessible part of the hull, and carefully examine the wood or metal of which the hull is constructed, to determine its condition, making all necessary hammer tests of hulls constructed of iron or steel. If the inspectors shall not have satisfactory evidence otherwise of the soundness of the hull of a wooden vessel, the Board of Local Inspectors shall not give a certificate until such hull has been bored or opened up to his satisfaction.

###### II-1-2. Means of Escape.

T/ALL On all tank ships where the plans and arrangements will possibly permit, all enclosures where the crew may be quartered or where any one may be regularly employed shall be provided with not less than two avenues of escape, so located that if one of such avenues is not available, another may be. The locality and arrangement of such additional means of escape shall be determined by the steamboat inspectors and the owners as will in their judgment best carry out the purposes for which this provision was made.

###### II-1-3. Name of Vessel.

TB/ALL (a) The name of every documented tank vessel of the United States shall be marked upon each bow and upon the stern, and the home port shall also be marked upon the stern. The name shall be in a light color on a dark ground, or in a dark color on a light ground, and shall be distinctly visible. The smallest letters used shall not be less in size than four inches.

T/ALL (b) In addition, every tank ship shall have her name conspicuously displayed in distinct, plain letters, of not less than six inches in length on each outer side of the pilot house.

###### II-1-4. Draft Marks of Tank Ships.

TB/ALL All tank ships of 50 gross tons and over, shall have the draft of the vessel plainly and legibly marked upon the stem and upon the sternpost or rudderpost, or at such other places at the stern of the ship as may be necessary for easy observance. The draft shall be taken from the bottom of the lowest part of the keel to the surface of the water, the bottom of the mark to indicate the draft in feet.

###### II-1-5. Hull Fittings.

TB/ALL (a) *Scuppers.*—All scuppers, sanitary, and other similar discharges which lead through the vessel's hull shall be fitted with efficient means for preventing the ingress of water in the event of a fracture of such pipes. The requirements above do not apply to the discharges in the machinery space connected with the main and auxiliary engines, pumps, etc. All scupper, coil, and sanitary pipes shall be adequately protected, where necessary.

TB/ALL (b) *Sea Chests, Sea Valves, Strainers.*—Sea chests, sea valves, and strainers shall be carefully examined by the inspector when the vessel is in drydock, and, if he deem it necessary, he may order them opened up for internal examination. This also applies to bilge injection valves.

TB/ALL (c) *Air ports, Deadlights.*—It shall be the duty of the inspectors when inspecting vessels to examine carefully all air ports and deadlights in the hull and to satisfy themselves that they are safe.

##### SECTION II-2. HULL REQUIREMENTS—NEW TANK VESSELS

###### II-2-1. Scantlings, Material, Workmanship.

TB/ALL The hull and deck houses shall be of steel or iron construction except that the pilot house may be constructed of wood. Scantlings, material, and workmanship, subdivision of cargo spaces, fitting of cofferdams and testing of tanks shall be at least equivalent to the requirements of the American Bureau of Shipping or other recognized classification society.

###### II-2-2. Subdivision of Cargo Space.

TB/ALL The cargo space shall be divided into tight compartments as necessary to avoid excessive stresses and to provide stability.

###### II-2-3. Cofferdams.

TB/ALL Tank vessels equipped to carry Grade A, B, C, or D liquids shall have their galleys, living quarters, general cargo spaces, boiler rooms, and enclosed spaces containing propelling machinery or other machinery where sources of vapor ignition are normally present, segregated from their cargo tanks by cofferdams or equivalent pump rooms, tanks, or air spaces.

###### II-2-4. Pump Rooms.

TB/ALL Tank vessels handling Grades A, B, C, or D liquids shall have their cargo pumps isolated from all sources of vapor ignition by gas-tight bulkheads. Totally enclosed motors of the "explosion proof" type, motors ventilated on both the intake and exhaust by ducts to atmosphere, and engines driven by steam shall not be considered to be sources of vapor ignition. The gas-tight bulkhead between the pump room and the pump engine compartment may be pierced by fixed lights, drive shaft and pump engine control rods, provided that the shafts and rods are fitted with stuffing boxes where they pass through the gastight bulkheads.

###### II-2-5. Living Quarters.

TB/ALL Partitions and sheathing shall be of approved fire-resistive construction.

###### II-2-6. Vessels with Independent Tanks.

TB/ALL On all tank vessels where the cargo tanks are independent of the hull the tanks shall be arranged to provide working space of not less than 15 inches between such tanks and the hull and bulkheads, or shall be arranged to be lifted bodily from the vessel. Pumps and piping shall be so located and constructed as to minimize the possibility of cargo leaking into the hold space. Compartments containing engines or electrical equipment or living quarters or galleys, shall be separated from the spaces containing the tanks by gas-tight bulkheads. Independent tanks shall be tested and shall be free of leakage under a hydrostatic pressure of not less than four pounds per square inch measured at the top of the tank.

###### II-2-7. Testing of Cargo Tanks and Bulkheads.

TB/ALL Cargo tanks shall be hydrostatically tested as required by the rules of the American Bureau of Shipping or other recognized classification society. Gas-tight bulkheads shall be subjected to a thorough hose test.

##### SECTION II-3. HULL REQUIREMENTS—EXISTING STEEL HULL, TANK VESSELS

###### II-3-1. Hull Requirements—Existing Steel Vessels—General.

TB/ALL In existing steel hull tank vessels the scantlings, material, and workmanship, the subdivision of cargo spaces, the arrangement of cofferdams, the testing of tanks and cofferdams, shall be at least equivalent to the requirements of a recognized classification society for the particular service specified in the application for the certificate of inspection and permit for the transportation of liquid inflammable cargoes in bulk (See Sec. I-3) as of the date when the tank vessel was built or as of the date when the vessel was converted into a tank vessel.

**II-3-2. Cofferdams—Existing Tank Vessels.**

TB/ALL Tank vessels carrying Grade A, B, or C liquids shall be required to conform to new construction requirements in regard to vertical cofferdams except that a dry cargo compartment shall be considered to be equivalent to a cofferdam, and except as provided for in II-3-4.

**II-3-3. Pump Rooms—Existing Tank Vessels.**

TB/ALL Tank vessels handling Grade A, B, C, or D products shall meet the requirements for new vessels.

**II-3-4. Pump Engine Compartment—Existing Steel Tank Vessels.**

TB/ALL No cofferdam will be required between a cargo tank and a compartment containing pumping engines and their auxiliaries which are used exclusively during pumping operations, provided the pumping engine compartment contains no cargo valves and is well ventilated, and provided further that internal combustion exhausts within the compartment are completely waterjacketed or insulated and that gasoline engine intakes are fitted with effective flame arresters.

**SECTION II-4. HULL REQUIREMENTS—EXISTING WOOD HULL, TANK VESSELS****II-4-1. Hull Requirements—Existing Wood Vessels—General.**

TB/ALL In existing wood hull tank vessels the scantlings, material, and workmanship, and the fitting and fastening of parts shall be at least equivalent to the requirements of a recognized classification society for the particular service specified in the application for the certificate of inspection and permit for the transportation of liquid inflammable cargoes in bulk (See Sec. 1-3) as of the date when the tank vessel was built, or as of the date when the vessel was converted into a tank vessel.

**II-4-2. Cargo Tanks—Existing Wood Hull Vessels.**

TB/ALL Cargo tanks shall be independent of the wood hull, shall be made of steel or iron, and shall be at least equivalent to the requirements of a recognized classification society. Where cargo tanks in wood hulls are not arranged to provide working spaces around them they shall be so constructed as to allow inspection of the hull, tanks, and bilges, and they shall be so installed that they can be raised to allow repairs to the hull structure and to themselves.

**II-4-3. Electric Bonding and Grounding of Tanks.**

TB/ALL All independent cargo tanks in wood hull tank vessels shall be electrically bonded together with stranded copper cable of not less than No. 4 B and S gauge and one end of this cable shall be grounded to a copper or brass plate of not less than two square feet in area and one-sixteenth inch in thickness and this plate shall be securely fastened to the hull at a point where it shall be covered by water when the tank vessel is unloaded.

**II-4-4. Hold Spaces and Bulkheads.**

TB/ALL In existing wood hull tank vessels containing independent cargo tanks for the transportation of Grade A, B, C, and D liquids, the hold spaces shall be considered as equivalent to a pump room and shall be safeguarded as such as required in these regulations: *Provided*, That where it is impracticable to construct a gas-tight bulkhead, two structurally tight, fire-resistive bulkheads without openings, separated by a well-ventilated air space at least twenty-four inches in width, may be used to isolate hold spaces from other spaces below deck which contain equipment or operations which normally may provide sources of vapor ignition.

**SECTION II-5. BOILERS, MACHINERY.****II-5-1. Design and Construction of Boilers.**

TB/ALL The design and construction of all boilers, mountings, steam pipes, etc., built on and after January 1, 1935, shall conform to amended Rules I and II, 51st Supplement to General Rules and Regulations of the Bureau of Navigation and Steamboat Inspection. The design and construction of all boilers built prior to January 1, 1935, shall

conform to the regulations in effect at the time such boilers were built.

**II-5-2. Tests and Inspection of Boilers and Equipment.**

TB/ALL Boilers, mountings, steam pipes, etc., shall be tested and inspected in accordance with Section 18, Amended Rules I and II, 51st Supplement to General Rules and Regulations.

**II-5-3. Request for Increase of Steam Pressure.**

TB/ALL Request for an increase of steam pressure for boilers shall be in accordance with Section S-21-14, Rule II, Supplement 51.

**II-5-4. Penalty for Overloading Safety Valves.**

TB/ALL The penalty for overloading of safety valves shall be in accordance with Section C-14-6, Rule II, Supplement 51.

**II-5-5. Installation of Fuel Oil Systems.**

TB/ALL No system for the use of petroleum or other mineral oil on any tank vessel as fuel shall be installed without the approval of the Bureau. Application for permission to install such fuel oil systems shall be made to the Bureau on the prescribed blank form together with blueprints, in triplicate. The blueprints shall show the fuel oil tanks, bracing, pumps, piping, riveting schedule, control valves, control apparatus, vent pipes, suction pipes and their controls, also the piping and appurtenances forming part of the fuel oil burning system, and the test to be applied to all fuel-oil tanks. The applications and blueprints shall be forwarded through the local inspectors of the district where the installation is to be made. The installation of such fuel oil systems shall comply with the requirements of Rule II, Supplement 51, Sections P-19-3, P-19-6, P-19-15, and P-19-16, except paragraph (r) of Section P-19-3.

**II-5-6. Installation of Gasoline Engines—New Vessels.**

TB/ALL (a) *Engines.*—Gasoline engines, whether for propulsion or for driving auxiliaries, shall have their air intakes so directed that backfire can not blow down into the bilges. They shall be fitted with effective backfire flame arresters. All carburetors shall be fitted with suitable drip collectors.

(b) *Gasoline Fuel Tanks.*—All gasoline fuel tanks shall be constructed and installed at least in accordance with the requirements of a recognized classification society. They shall be inspected in accordance with Rule 2, Section I-18-12—"Unfired Pressure Vessels", 51st Supplement. Gasoline fuel tanks shall be substantially secured to prevent movement and shall be installed to afford easy access for inspection. No gauge glasses or try cocks shall be fitted to such tanks.

(c) *Gasoline Fuel Piping.*—The fuel piping for gasoline engines shall comply with Rule II, Section 19 (51st Supplement), "Piping Systems", and in addition it shall also comply with the following requirements: It shall be run in sight whenever practicable, be protected from mechanical injury and effectively secured against vibration. Shut-off valves or cocks of a suitable type shall be installed in supply lines and located in accessible positions at tanks. Similar shut-off valves shall be located in the supply lines close to the carburetors. No outlets for drawing gasoline shall be permitted in engine compartments. Filling and sounding pipes for fuel tanks shall terminate on deck and vents shall terminate at least two feet above the deck and not less than three feet from any opening into living quarters. Filling pipes shall extend nearly to the bottoms of fuel tanks.

**II-5-7. Internal Combustion Engine Exhausts.**

TB/ALL Exhaust lines from internal combustion engines, where run through the deck, shall be extended at least four feet above deck. A spark arrester shall be installed in each exhaust line. Exhaust piping shall be either insulated or water-cooled.

**II-5-8. Gasoline Engines—Existing Vessels.**

TB/ALL Existing installations of gasoline engines and internal combustion engine exhausts shall comply with II-5-6 and II-5-7 in so far as practicable and reasonable.



**II-5-9. Auxiliary Machinery.**

TB/ALL All tank ships shall be provided with the necessary auxiliary machinery, pumps, and piping systems for the safe and efficient operation of the vessel. All such installations shall comply with Rule 2, 51st Supplement of the General Rules and Regulations and be at least equivalent to the requirements of a recognized classification society.

**II-5-10. Bilge Pumps for Tank Barges.**

B/ALL (a) All tank barges shall be provided with means for removing bilge water from all parts of the vessel other than the cargo tanks.

B/R (b) In barges operated on inland waters tributary to the Gulf of Mexico and which are operated in flotilla, siphons mounted on, or portable pumps, either hand- or power-operated, carried on the barges and/or towing vessel will be considered as suitable means for pumping spaces other than cargo tanks.

**II-5-11. Extra Steering Apparatus.**

T/ALL (a) Extra steering apparatus consisting of relieving tackles or tiller shall be provided for all tank ships: *Provided*, That where a tank ship is equipped with auxiliary power or hand steering gear attached to the rudder entirely independent of the regular steering gear, it may be used in lieu of the relieving tackles or tiller required above.

T/ALL (b) Effective January 1, 1936, and where reasonable and practicable, the emergency steering wheel on all new and existing tank ships shall be located on the after weather deck.

**II-5-12. Examination of Tail Shaft.**

T/OC The outboard shaft or shafts on every ocean or coastwise tank ship shall be drawn for examination once at least in every three years: *Provided*, That if the circumstances warrant it, the supervising inspector of the district may extend this time to the next regular drydocking period, not to exceed four months, and: *Provided further*, That when it is shown that a vessel has had a long period of lay-up, the supervising inspector of the district may grant an extension equal to the time the vessel has been out of commission, but in no case shall the extension exceed one year.

**SECTION II-6. ELECTRICAL INSTALLATION****II-6-1. Electrical Installation—Pump Rooms—New Vessels.**

TB/ALL (a) The electrical installation in pump rooms and in enclosed spaces immediately adjoining cargo of tank vessels built after the effective date of these regulations shall be subject to special regulation and inspection as set forth below.

(b) No ground connections may be used in any part of the electrical circuits. The armor on all cables shall be electrically and mechanically continuous and effectively grounded to the metal hull at each end of the run, except that final sub-circuits may be grounded at the supply end only.

(c) Wiring in pump rooms and enclosed spaces immediately adjoining cargo tanks is to be leaded and armored, and shall be run through gas-tight fittings having stuffing glands at inlets and outlets. It may be run in metal trunkways to protect it against injury provided the trunkways are securely supported and provision is made for the circulation of air and to prevent the accumulation of water in any part of the trunk.

(d) Where practicable the cable is to be located well inboard from the sides, preferably along or near the centerline, to reduce the risk of injury in the event of collision, but it shall be kept clear of tank openings. Feeders shall be run as far as practicable to avoid pump rooms and enclosed spaces immediately adjoining cargo tanks.

(e) Joints in wiring shall be made only in wiring appliances, such as junction boxes, outlet boxes, etc., and such boxes shall be completely metallic and shall be gas-tight.

(f) Switchboards, distributing panels, switches, fuses, and other circuit-interrupting devices are not to be fitted in pump rooms or enclosed spaces immediately adjoining cargo tanks, except on barges, where they may be placed in pump engine compartment if in compliance with II-3-4.

**II-6-2. Electric Lighting of Pump Rooms—New Vessels.**

TB/ALL All electric lamps in pump rooms and enclosed spaces immediately adjoining cargo tanks shall be enclosed in vapor-tight glass globes, and shall have double pole controlling switches located outside of these spaces. Electric lamps in cargo pump rooms shall be located as high as practicable.

**II-6-3. Electric Motors in Pump Rooms—New Vessels.**

TB/ALL Only electric motors ventilated to the atmosphere by suction and discharge air ducts, or totally enclosed motors of the "explosion proof" type shall be used in pump rooms or in enclosed spaces immediately adjoining cargo spaces. Separately ventilated motors are to have pressure type ventilation and shall be arranged with an automatic shut-off to open the circuit when the ventilating fan motor stops. The system is to be so interlocked that the pump motor cannot be started prior to a circulation of air. The air ducts are to lead to and from the atmosphere outside the pump room and are to terminate not less than three feet above the deck and not less than six feet from any cargo tank vent.

**II-6-4. Location of Storage Batteries—New Vessels.**

TB/ALL Storage batteries shall not be located in cargo pump rooms. The space in which they are located shall be well ventilated and they shall be protected against mechanical and electrical injury including short circuiting and overloading. Batteries shall be secured against movement and acid batteries shall be set in lead-lined trays.

**II-6-5. Electric Installation—New Vessels—Other Than Pump Rooms and Spaces Adjacent to Cargo Tanks.**

TB/ALL The electrical installation of tank vessels built after the effective date of these regulations and not covered by II-6-1 to II-6-4 above shall be at least equivalent to the requirements of a recognized classification society.

**II-6-6. Electrical Installation—Existing Tank Vessels.**

TB/ALL The electrical installation in the pump rooms and enclosed spaces immediately adjoining cargo tanks of existing tank vessels shall be made to comply with II-6-1 to II-6-4 above to the extent that the changes required are, in the opinion of the local inspectors safe and dependable. The remaining electrical installation of existing tank vessels shall be at least equivalent to the requirements of a recognized classification society as of the date that the vessel was built or converted to a tank vessel.

NOTE.—For the electrical bonding and grounding of independent cargo tanks in existing wood hulls see II-4-3.

**SECTION II-7. VENTILATION AND VENTING****II-7-1. Ventilation—New Vessels.**

TB/ALL All parts of the vessel other than cargo, fuel, and water tanks and cofferdams shall be provided with efficient means of ventilation. Pump rooms and compartments containing machinery where sources of vapor ignition are normally present shall be ventilated in such a way as to remove vapors from points near the floor level or the bilges. Effective steam or air actuated gas ejectors or blowers or ventilators fitted with heads for natural ventilation will be approved for this purpose.

**II-7-2. Ventilation—Existing Vessels.**

TB/ALL Ventilation of existing tank vessels shall be made to equal the requirements of new vessels where the necessary changes are, in the opinion of the local inspectors, necessary in the interest of safety.

**II-7-3. Ventilation—Wood Hull Barges.**

B/ALL The hold spaces of wooden barges containing independent cargo tanks shall be considered to be equivalent to pump room spaces and shall be ventilated and safeguarded as such.

**II-7-4. Venting of Cargo Tanks—New Tank Vessels.**

TB/ALL (a) Each cargo tank of a tank vessel shall be equipped with a vent.

(b) Cargo tanks in which Grade A liquids are to be transported shall be fitted with a venting system consisting of a branch vent line from each cargo tank connected to a vent header which shall extend to a reasonable height above the weather deck and be fitted with a flame arrester or pressure-vacuum relief valve at the outlet to the atmosphere. Each branch vent line may be provided with a manually-operated control valve, provided it is by-passed with a pressure-vacuum relief valve or each cargo tank to which such a branch vent line is connected is fitted with an independent pressure-vacuum relief valve.

In barges with independent tanks carrying Grade A liquids, separate discharge pipes may be fitted to each pressure-vacuum relief valve and carried to a reasonable height above deck.

(c) Cargo tanks in which Grade B or C liquids are to be transported shall be fitted with individual pressure-vacuum relief valves or shall be fitted with a venting system consisting of branch vent lines connected to a vent header which shall extend to a reasonable height above the weather deck and be fitted with a flame arrester or a pressure-vacuum relief valve at the outlet to the atmosphere.

(d) Cargo tanks in which Grades D or E liquids only are to be transported shall be fitted with goose-necked vents and flame screens unless such tanks are vented by pressure-vacuum relief valves or a venting system of branch vent lines and a vent header.

#### II-7-5. Venting of Tanks Fitted with Inert Gas System.

TB/ALL Tank vessels equipped with an approved system for maintaining all cargo tank vapor spaces non-inflammable shall be accepted in lieu of the requirements of II-7-4 above.

#### II-7-6. Venting of Cofferdams—New Vessels.

TB/ALL Cofferdams shall be provided with goose neck vents fitted with screen or pressure-vacuum relief valves.

#### II-7-7. Venting of Bunker Tanks—New Vessels.

TB/ALL Bunker tanks shall be vented in accordance with Rule II, Supplement 51, Section P-19-15.

#### II-7-8. Minimum Size of Vent Pipes—New Vessels.

TB/ALL Vent pipes from tanks, cofferdams, and bunkers shall be not less than 2½ inches in diameter.

#### II-7-9. Venting of Cargo Tanks—Existing Vessels.

TB/ALL The venting of cargo tanks of existing vessels shall be made to equal the requirements of new vessels where the necessary changes are, in the opinion of the local inspectors, necessary in the interest of safety. Provided, that on existing vessels carrying Grade A cargo having a Reid Vapor Pressure of not more than 16 pounds, individual vents may be allowed but they shall be fitted with pressure-vacuum relief valves; when the Reid vapor pressure exceeds 16 pounds, no relaxation shall be allowed from new ship requirements.

### SECTION II-8. CARGO PUMPS—CARGO PIPING

#### II-8-1. Cargo Pumps—New Vessels.

TB/ALL Cargo pumps shall be designed and installed to minimize the danger of sparking. Special care shall be exercised in the design of packing spaces in order to secure ample depth and accessibility of glands. Where cargo pump shafts pierce gas-tight bulkheads, stuffing boxes with readily accessible gas-tight glands shall be provided.

#### II-8-2. Cargo Pump Fittings and Controls—New Vessels.

TB/ALL (a) A suitable relief valve shall be installed in the discharge of each cargo pump and piped back into the suction.

(b) A pressure gauge shall be installed for each pump discharge and it shall be located at a point visible with respect to the pump controls.

(c) Means shall be provided for controlling the cargo or pump room bilge pumps and their suction and discharges in order that a flooded pump room may be pumped out.

#### II-8-3. Cargo Pumps—Existing Wood Hull Vessels.

TB/ALL (a) Cargo pumps on existing wood hull vessels may be located in a hold space containing independent cargo

tanks, or on deck. If the pump driving unit is a steam engine it also may be located in the hold space. If other types of driving units are used they shall be located on deck or in an engine compartment. If the pump drive shaft passes through decks or bulkheads into a hold space or pump room, it shall be provided with suitable stuffing boxes at such points.

(b) Cargo pumps on existing wood hull tank vessels may be connected to bilges, in hold spaces containing independent cargo tanks: *Provided*, That such suction branch is fitted with two valves, one of which shall be of a non-return screw down type.

#### II-8-4. Cargo Piping—New Vessels.

TB/ALL (a) Pipe lines shall be carefully fitted to avoid stresses at the joints. For sizes above two inches in diameter, flanged or welded connections shall be made throughout and packing shall be of a material suitable for the cargo carried. Connections at oil-tight bulkheads or other divisions shall be made in such manner that the plating does not form part of a flanged joint. Cargo pipe lines shall not pass through spaces other than pump engine compartments containing machinery where sources of vapor ignition are normally present. Cargo lines can be carried through bunker spaces only by providing a pipe tunnel or alley.

(b) Where the pump room bilge suction is connected to the cargo pump, two valves shall be fitted in this suction branch, one of which shall be of a non-return screw down type.

(c) Valve operating rods in the cargo tanks shall be solid and of ample size, well guided and supported, and attached to the valve stems in a manner to guard against their working loose. Where such valve rods pass through the deck, gas tight stuffing boxes shall be fitted. The leads of valve rods shall be as direct as possible. All valves and fittings shall be of material, design, and manufacture for the intended service on the cargo system; either rising or non-rising-stem valves may be used.

#### II-8-5. Cargo Pumps and Piping—Existing Vessels.

TB/ALL Cargo pumps and piping which do not fully comply with these regulations shall be made as nearly equal to the requirements for new vessels as is necessary in the interest of safety.

### SECTION II-9. EQUIPMENT AND MISCELLANEOUS

#### II-9-1. Vessel's Name on Equipment.

TB/ALL The equipment of all tank vessels, such as fire hose, fire axes, boats, rafts, life preservers, and floats, shall be painted or branded with the name of the vessel upon which they are used.

#### II-9-2. Whistles.

T/ALL Each tank ship shall be provided with an efficient whistle sounded by steam or by some substitute for steam to give the necessary whistle signals. All whistles shall be placed at an elevation of not less than 6 feet above the top of the pilot house, where the clearance for passing under bridges will permit it. Tank ships navigating the Red River of the North, Yukon, and similar rivers, and rivers whose waters flow into the Gulf of Mexico, and tank ships of less than 100 gross tons may have their whistles located not less than 2 feet above the tops of their pilot houses.

#### II-9-3. Fog Bells.

TB/ALL The efficient fog bell required upon vessels by law shall be held to mean a bell not less than 8 inches in diameter from outside to outside and constructed of bronze or brass or other material equal thereto in tone and volume of sound, and located where the sound shall be the least obstructed.

#### II-9-4. Signals—Bridge to Engine Room and Steering Station.

T/ALL (a) Tank ships using the bell signals between the pilot house and engine room shall have a tube of proper

size, so arranged as to return the sound of the bell signals to the pilot house. If such vessels are equipped with engine room telegraphs for signals such apparatus will be considered as fulfilling the above requirement for repeating back signals.

(b) Tank ships shall be fitted with voice tubes for communicating between the bridge and engine room but telephones shall be used for this purpose instead of voice tubes, where the distance between perpendiculars of the bridge and the forward part of the engine room exceeds 150 feet.

(c) On all tank ships on and after January 1, 1936, and where reasonable and practicable there shall be provided an efficient means of communication between the pilot house and the emergency steering station and the steering engine room.

(d) Signal apparatus between pilot house, engine room, steering engine room, and emergency steering stations—whether they be telegraph, bell, whistle, telephone, or voice tube—shall be examined and tested at each annual inspection.

#### II-9-5. Alarm Bells.

T/ALL All tank ships of over 100 gross tons shall have sleeping accommodations equipped with a sufficient number of alarm bells of not less than 6" in diameter and so located as to warn all occupants.

#### II-9-6. Sounding Machines.

T/OCL It shall be the duty of the local inspectors to require all tank ships of 500 gross tons and upward to be equipped with an efficient mechanical deep-sea sounding apparatus, in addition to the ordinary deep-sea hand lead. The mechanical deep-sea sounding apparatus above required shall be installed, kept in working order, and ready for immediate use.

#### II-9-7. Deck Life Line.

TB/OCLB On all tank vessels where the distance is more than 150 feet between deck houses, a wire cable shall be stretched between the deck houses at all times when the vessel is loaded and being navigated, this cable to be not less than 5 feet from the deck; and there shall be attached at all times to the cable a traveler with a line of sufficient continuous length to insure its operation in order that communication between both ends of the vessel may be facilitated at all times: *Provided*, That, in addition to the traveler with the endless whip, as many loose rings with lanyards attached may be placed on the cable as may be deemed necessary by the master in charge of the vessel. Failure to have such cable stretched and traveler attached at all times when the vessel is loaded and being navigated shall be sufficient cause for the suspension of the license of the master or officer in charge: *Provided*, That a fore and aft raised bridge shall be accepted in lieu of the wire cable and traveler.

#### II-9-8. Guards at Dangerous Places.

TB/ALL It shall be the duty of the inspectors when inspecting a vessel to see that all exposed and dangerous places, such as gears and machinery, are properly protected with covers, guards, or rails, in order that the danger of accidents may be minimized, and on vessels equipped with radio (wireless) the lead-ins shall be efficiently incased or insulated to insure the protection of persons from accidental shock. Such lead-ins shall be located so as not to interfere with the launching of lifeboats and life rafts.

#### II-9-9. Seagoing Barges.

B/OC Every seagoing barge shall be equipped with at least one anchor with suitable chain or cable to be at least equivalent to the American Bureau of Shipping rules.

#### II-9-10. Cargo Hose.

TB/ALL Cargo hose, when carried on tank vessels, shall be of a grade suitable for oil service, and designed to withstand 100 pounds per square inch, minimum working pressure.

### RULE III

#### [Outline of Sections]

#### Life Saving Appliances

- SECTION III-1. General.
  - III-1-1. Inspection.
  - III-1-2. New and Existing Tank Vessels.
  - III-1-3. Responsibility of Master.
  - III-1-4. Approval for Repairs and Alterations.
- SECTION III-2. Requirements—Lifeboats, Liferafts, Buoyant Apparatus.
  - III-2-1. Tankships, Ocean.
  - III-2-2. Barges, Ocean.
  - III-2-3. Tank Vessels—Coastal and Inland.
  - III-2-4. Unmanned Tank Vessels.
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  - III-3-1. Tankship lifeboat equipment—Ocean and Coastwise.
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  - III-3-4. Barges—Lifeboat Equipment, All Waters.
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### A. P. I.

#### SUGGESTED RULES FOR TANK VESSELS

### RULE III

#### Life-Saving Appliances

#### SECTION III-1. GENERAL—LIFE-SAVING APPLIANCES

##### III-1-1. Inspection.

TB/ALL At each annual inspection and at any other time as required in the judgment of the local inspectors, all life-saving appliances on the tank vessel shall be inspected.

##### III-1-2. New and Existing Tank Vessels.

TB/ALL All tank vessels subject to these regulations shall have lifeboats, disengaging apparatus, life rafts, life preservers, and all other life-saving apparatus in accordance with these regulations, provided, however, that all life-saving apparatus which is of the character that complied with the rules and regulations of the Board of Supervising Inspectors, pursuant to Title 52 of the Revised Statutes, on vessels in existence at the time that these regulations are promulgated and have been in use on such vessels may be approved by the local inspectors, provided such existing life-saving equipment and apparatus is found to be in good and workable condition. Where such existing life-saving equipment and apparatus are not found to be in good and workable condition they shall be repaired or else replaced by life saving equipment and apparatus of the latest approved type, as required by these regulations. Where such existing life-

saving equipment and apparatus are found to be in good and workable condition but deficient as to quantity or numbers, the additional quantity or numbers required by these regulations shall be of the latest approved type.

### III-1-3. Responsibility of Master.

TB/ALL It shall be the duty of the master or officer in charge to see that the boats, rafts, davits, falls, life preservers, and other life-saving appliances are at all times ready for use.

### III-1-4. Approval for Repairs and Alterations.

TB/ALL No extensive repairs or alterations, except in emergency, shall be made to any lifeboat, lifeboat disengaging apparatus, life raft, life preserver, or other appliance subject to inspection, without advance notice to the local inspectors. Such repairs or alterations shall so far as is practicable be made with materials and tested in the manner specified within these rules for new construction. Emergency repairs or alterations shall be reported as soon as practicable to the local inspectors in the district where the vessel may call after such repairs are made; nor shall any lifeboat or life raft be reconditioned or used on a tank vessel other than that for which it was built, without notice to and supervision by the U. S. local inspectors in the district wherein such reconditioning or repairs are to be made.

## SECTION III-2. REQUIREMENTS FOR LIFEBOATS, RAFTS, AND BUOYANT APPARATUS.

### III-2-1. Tankships, Ocean.

T/O All tankships which operate more than 20 miles off the coast shall carry a sufficient number of lifeboats on each side to accommodate all persons on board. No boat shall be less than 180 cubic feet measurement.

### III-2-2. Barges, Ocean.

B/O All tank barges which operate more than 20 miles off the coast shall carry a sufficient number of lifeboats to accommodate all persons on board. No boat shall be less than 125 cubic feet measurement.

### III-2-3. Tank Vessels—Coastal and Inland Waters.

TB/CLB (a) All tank vessels operating within 20 miles of the coast, on the Great Lakes, or on lakes, bays, and sounds, shall carry a sufficient number of lifeboats to accommodate all persons on board. No boat on tank vessels of 100 gross tons or over shall be of less than 125 cubic feet measurement. No boat on tank vessels of less than 100 gross tons shall be of less than 60 cubic feet measurement, except by approval of the Bureau.

TB/BR (b) All tank vessels operating exclusively on rivers and/or in harbors shall carry boats, life rafts, or buoyant apparatus of sufficient number to accommodate all persons on board. The minimum size of any piece of buoyant apparatus shall accommodate at least five persons.

### III-2-4. Unmanned Tank Barges.

B/R. Tank barges operating exclusively on rivers and where the crew is carried on the towing vessel, need not be equipped with lifeboat nor buoyant apparatus.

## SECTION III-3. EQUIPMENT—LIFEBOATS, LIFERAFTS, AND BUOYANT APPARATUS.

### III-3-1. Tankship Lifeboat Equipment, Ocean and Coastwise.

Lifeboats, except those hereinafter specified, shall be equipped as follows:

(a) *Bailer*.—One bailer of sufficient size and suitable for bailing, with lanyard attached.

(b) *Boathooks*.—Two boathooks of clear grained white ash of suitable length but not less than 8 feet by 1½" in diameter. This applies to new and replacement requirements.

(c) *Bucket*.—One galvanized iron bucket of about 2 gallon capacity, with lanyard attached.

(d) *Compass*.—One efficient liquid compass with not less than a 2-inch card.

T/OC (e) *Distress Lights*.—A watertight metal case containing 12 self-igniting red lights capable of burning and giving forth a brilliant red flame of not less than 500 candle-

power for at least 2 minutes. Each distress light shall be treated and made impervious to moisture, and the manufacturer shall place upon it a statement in clear, black letters covering the candle power and burning range, the directions for firing, the trade name of the distress light, and the name and address of the manufacturer. The container shall be constructed of 18-ounce, or No. 22 B. W. G. copper, or equal noncorrodible metal, lock-jointed and soldered, the bottom to be rolled in and soldered. The cover or top, of cast brass not less than ⅛-inch in thickness and 5 inches in diameter shall be so constructed as to be easily removed, and made watertight by a fitted rubber gasket.

(f) *Signal Pistol*.—After July 1, 1936, an approved signal pistol with lanyard attached and 12 red lights, the red light to give forth a brilliant red flame of not less than 30,000 candlepower capacity capable of being projected vertically to a height of not less than 150 feet and of not less than 30 seconds burning duration, the whole to be contained and carried in a portable watertight metal case.

(g) *Ditty Bag*.—One canvas bag containing sailmaker's palm, needles, sail twine, marline, and marline spike.

(h) *Drinking Cups*.—Two enameled drinking cups.

(i) *Flashlight*.—After January 1, 1936, one approved flashlight contained in a portable, watertight metal case. The case shall be constructed of 18-ounce or No. 22 gauge B. W. G. copper or other noncorrosive metal, lock-jointed and soldered, bottom to be rolled in and soldered, cover, or top, to be made of cast brass not less than one-eighth of an inch thick to fit down on a rubber gasket to make container watertight. The cover shall be so constructed as to be easily removed. Means should be taken to cushion the flashlight and prevent contact with the metal sides of the container. The flashlights shall be of all metal, rugged construction, of focusing type with a reflector head of about 2 inches in diameter.

The batteries for the standard 3-cell type shall be of the sal ammoniac type with depolarizer. They shall have a non-spillable electrolyte and be free from leakage during the useful life of the cell. They shall be of the tubular construction, comprising three cells assembled in line, and to end in a suitable close-fitting tube or jacket of news, chip, or straw-board. The brass cap on the carbon rod and the zinc bottom of the cell shall serve as the terminals. The batteries shall be marked with the "trade name of the cell, the name of the manufacturer or trade mark number, or other designations of size, the date of manufacture, and the date of expiration of a guaranteed period for U. S. Marine Service."

The batteries shall not be continued in use for lifeboat equipment for a period exceeding 1 year from the date of manufacture.

The flashlight batteries allowed under the specification shall be of a quality to meet the National Bureau of Standards tests as to voltage, capacity, delayed service tests, and required performance.

T/OC (j) *Hatchets*.—Two single-edged hatchets attached by lanyards and readily available, one at each end of the boat.

(k) *Illuminating Oil*.—One gallon illuminating oil in metal container.

(l) *Lantern*.—One lantern containing sufficient oil to burn at least 9 hours and ready for immediate use.

(m) *Life Line*.—A life line, or grab line, properly secured the entire length on each side, festooned in bights not longer than 3 feet, with a seine float in each bight. The life line shall be of a size and strength not less than 12-thread manilla rope, and the seine float in each bight shall hang to within 12 inches of the surface of the water when the boat is light.

(n) *Life Preservers*.—Two life preservers. These life preservers are in addition to the vessel's equipment of life preservers.

(o) *Locker*.—A suitable locker or box for the storage and preservation of the small items of equipment.

(p) *Mast and Sails*.—A mast or masts with at least one good sail, and proper gear for each, the sail and gear to be protected by a suitable canvas cover.

(q) *Matches*.—One box of safety matches in a watertight container, and carried in a box secured to the underside of the stern thwart, or stowed in locker.

**T/OC (r) Oars.**—A single banked complement of oars, two spare oars, and a steering oar with a rowlock or becket conforming to the following requirements for new and replacement equipment:

*Minimum Number and Length of Oars*

Length of boat	Number of oars	Spare oars	Total, including steering oar	Rowing oars (feet)	Steering oars (feet)
16 feet and under 18 feet.....	4	2	7	10	12
18 feet and under 20 feet.....	4	2	7	11	13
20 feet and under 24 feet.....	4	2	7	13	14
24 feet and under 28 feet.....	6	2	9	14	15
28 feet and over.....	6	2	9	15	16

**NOTE.**—Motor lifeboats and lifeboats fitted with propellers operated by hand shall be equipped with 4 oars and 1 steering oar.

(s) **Painter.**—One painter of manila rope not less than 2¾ inches in circumference and a length not less than three times the distance between the boat deck and the light craft.

(t) **Plugs and Pumps.**—Drain holes, fitted with automatic plugs, shall be provided with two caps attached by chains. Decked lifeboats shall have no plug-hole, but shall be provided with at least two bilge pumps.

(u) **Propellers (Hand-Operated).**—Lifeboats may be fitted with a hand-operated propeller of an approved type, but all lifeboats, having a capacity of 60 or more persons, shall be fitted with a hand-operated propeller of an approved type.

The hand-propelling gear shall be substantially constructed and fitted in the boat in an efficient manner and be such that the boat may be readily maneuvered away from the ship's side after being launched and steerageway maintained, under adverse weather conditions. The gear shall be of such character that it may be operated by persons untrained in its use. It shall be such that it can be operated satisfactorily when the boat is partially flooded and will be effective in propelling a boat fully or partially loaded.

The above propelling gear shall be required in all such lifeboats fitted on new vessels and to the lifeboat replacements on existing vessels.

(v) **Provisions.**—An airtight receptacle containing 2 pounds of provisions for each person. These provisions may be of hard bread or its equivalent in any approved emergency ration of cereal or vegetable compound. No meat or other ration requiring saline preservative shall be allowed. The receptacle shall be of metal, fitted with an opening in the top not less than 5 inches in diameter properly protected by a screw cap made of heavy cast brass with machine thread and an attached double toggle, seating to a pliable rubber or felt gasket, which shall insure a tight joint.

(w) **Rowlocks.**—One set and a half of thole pins or rowlocks attached to the lifeboat by separate chains.

(x) **Rudder.**—One rudder having either tiller or yoke and yoke lines. The rudder shall be made of clear straight-grained oak or fir and shall be stiffened across the bottom edge by a piece of wood of the same character, properly secured. Pintles shall be strapped to the wood and through fastened and be so adjusted that the lower pintle will project at least 1½ inches more below its gudgeon than does the upper one.

**T/OC (y) Sea Anchor.**—One sea anchor constructed of good quality canvas or other satisfactory material; and, if of circular pattern, shall be not less than 2 feet in diameter for lifeboats 26 feet long and under. In larger boats the diameter of the sea anchor shall not be less than 2 feet 6 inches. Sea anchors for replacements and new equipment must comply with the above.

(z) **Storm Oil.**—One container holding 1 gallon of vegetable or animal oil, so constructed that the oil can be easily distributed on the water and so arranged that it can be attached to the sea anchor.

(aa) **Water Breakers.**—Wooden breakers or suitable tanks fitted with spigots for drawing water and containing at least 1 quart of water for each person.

### III-3-2. Tank Ship Lifeboat Equipment, Great Lakes.

**T/L (a)** All lifeboats on vessels operating on the Great Lakes shall carry the following equipment:

(b) **Bailer.**—One bailer.

(c) **Boat Hooks.**—One boat hook attached to a staff of suitable length.

(d) **Bucket.**—One galvanized iron bucket with lanyard attached.

(e) **Compass.**—One efficient liquid compass with not less than a 2-inch card.

(f) **Distress Lights.**—A water tight metal case containing 12 self-igniting red lights capable of burning at least two minutes and to give forth a brilliant red flame of not less than 500 candlepower, signals to be treated and made impervious to moisture. The container to be constructed of 18-ounce or No. 22 B. W. G. copper or equal noncorrosive metal, lock-jointed and soldered, bottom to be rolled in and soldered, cover or top to be made of cast brass not less than one-eighth of an inch thick and 5 inches in diameter, to fit down on rubber gasket to make container watertight. The cover shall be so constructed as to be easily removed. Either a flashlight or a signal pistol with 12 lights may be substituted for 6 of the above distress lights, but in any event at least six of the above lights must be carried.

(g) **Signal Pistol.**—(Optional, see Distress Lights.) An approved signal pistol with 12 combination red lights to give forth a brilliant (red) flame of not less than 30,000 candlepower capacity capable of being projected vertically to a height of not less than 150 feet and of not less than 30 seconds burning duration, together with a holder not less than 18 inches in length when extended, and 12 scratchers for igniting the friction prime when using the lights as a hand signal, the whole to be contained and carried in a portable watertight metal case.

**T/L (h) Flashlight.**—(Optional, see Distress Lights.) One standard 3-cell focusing flash light and 3 extra standard batteries contained in a portable watertight metal case. The flashlights for lifeboats shall be of all metal, rugged construction, of focusing type with a reflector head of about 2 inches in diameter. The reflector shall have a true parabolic surface, coated with a heavy silver polished plate, free from marks and dents, and protected by a coat of clear lacquer. The flashlight shall be provided with two extra lamps, and all external parts of the flashlight shall be protected by a heavy nickel-plating or a black baked-on lacquer or enamel.

The flashlight batteries shall be of the sal ammoniac type with depolarizer. They shall have a nonspillable electrolyte and be free from leakage during the useful life of the cell. They shall be of the tubular construction, comprising three cells assembled in line, end to end in a suitable close-fitting tube or jacket of news, chip, or strawboard. The brass cap on the carbon rod and the zinc bottom of the cell shall serve as the terminals. The batteries shall be marked with the "trade name of the cell, the name of the manufacturer or trademark number, or other designations of size, the date of manufacture, and the date of expiration of a guarantee period for U. S. Marine Service." Local or assistant inspectors making annual or reinspections shall satisfy themselves that such flashlight equipments are in condition to warrant the belief that same are efficient for emergency use between the date of such inspection and the next following inspection or reinspection date. The batteries, however, shall not be continued in use for lifeboat equipment for a period exceeding one year from the date of manufacture.

The flashlight batteries allowed under its specification shall be of a quality to meet the United States Bureau of Standards tests as to voltage, capacity, delayed service tests, and required performance.

(i) **Hatchets.**—Two hatchets.

(j) **Illuminating Oil.**—One can containing one gallon of illuminating oil.

(k) **Lantern.**—One lantern containing sufficient oil to burn at least nine hours, and ready for immediate use.

(l) **Life Line.**—A properly secured life line the entire length on each side, festooned in bights not longer than 3



feet, with a seine float in each bight. The life line shall be of a size and strength not less than 12-thread manila rope, and the seine float in each bight shall hang to within 12 inches of the surface of the water when the boat is light.

(m) *Life Preservers*.—Two life preservers.

(n) *Mast and Sails*.—A mast with one good sail at least and proper gear (this does not apply to motor lifeboats), the sail and gear to be protected by a suitable canvas cover: *Provided, however* That lifeboats of less than 125 cubic feet capacity are exempt from this requirement.

(o) *Matches*.—One box of safety matches wrapped in a waterproof package and carried in a box secured to the underside of the stern thwart.

(p) *Oars*.—A full complement of oars and two spare oars, and a steering oar with rowlock or becket.

(q) *Painter*.—One painter of manila rope of not less than 2¾ inches in circumference and of suitable length.

(r) *Plugs*.—Where automatic plugs are not provided there shall be two plugs secured with chains for each drain hole.

(s) *Rowlocks*.—One set and a half of thole pins or rowlocks attached to the boat with separate chains.

(t) *Rudder*.—One rudder with tiller or yoke and yoke lines, in boats of special construction where a rudder is difficult of installation, it may be dispensed with.

(u) *Sea Anchor*.—A sea anchor.

(v) *Storm Oil*.—A vessel containing 1 gallon of vegetable or animal oil, so constructed that the oil can be easily distributed on the water and so arranged that it can be attached to the sea anchor.

### III-3-3. *Tank Ship Lifeboat Equipment—Bays, Sounds, Lakes Other Than the Great Lakes, and Rivers.*

T/BR (a) All lifeboats on tank vessels operating on lakes, bays, sounds, and rivers, shall carry the following equipment:

(b) *Boat Hook*.—One boat hook attached to staff of suitable length.

(c) *Bucket*.—One bucket with lanyard attached.

(d) *Ax*.—One ax.

(e) *Lantern*.—One lantern containing sufficient oil to burn at least nine hours and ready for immediate use.

(f) *Life Line*.—A properly secured life line the entire length on each side, such line to be festooned in bights not longer than 3 feet, with a seine float in each bight. The life line shall be of a size and strength not less than 12-thread manila rope, and the seine float in each bight shall hang to within 12 inches of the surface of the water when the boat is light.

(g) *Life Preservers*.—At least two life preservers except on tank vessels operating exclusively on rivers flowing into the Gulf of Mexico, where one only is required. Wooden floats may be substituted where the same are allowed by law.

T/BR (h) *Matches*.—One box of safety matches wrapped in a waterproof package and carried in a box secured to the underside of the stern thwart.

(i) *Oars*.—A full complement of single bank oars and two spare oars of suitable length except on tank vessels operating exclusively on rivers flowing into the Gulf of Mexico, where a total of five oars only is required.

(j) *One Steering Oar* with rowlock or becket except on tank vessels operating exclusively on rivers.

(k) *Rudder*.—One rudder with yoke and suitable yoke ropes, except for tank vessels operating exclusively on rivers.

(l) *Painter*.—One painter of manila rope of not less than 2¾ inches in circumference, properly attached, and of suitable length.

(m) *Plugs*.—Two plugs for each drain hole, attached to the boat with chains.

(n) *Rowlocks*.—A full complement of rowlocks and two spare rowlocks, each rowlock to be attached to the boat with a separate chain.

### III-3-4. *Barges—Lifeboat Equipment, All Waters.*

B/ALL (a) Lifeboats on barges shall be equipped as follows:

(b) *Boat Hooks*.—Two boat hooks of suitable length but not less than 8 feet long by 1½ inches in diameter.

(c) *Bucket*.—One galvanized iron bucket of about 2-gallon capacity with lanyard attached.

(d) *Life Line*.—One life line properly secured the entire length on each side, festooned in bights not longer than 3 feet with a seine float in each bight.

(e) *Life Preservers*.—Two life preservers in addition to the vessel's complement of life preservers.

(f) *Oars*.—Four oars and one steering oar.

(g) *Painter*.—One painter of manila rope not less than 2¾ inches in circumference, and of a suitable length.

B/ALL (h) *Plugs*.—Drain holes, fitted with automatic plugs, shall be provided with two caps attached by chains.

(i) *Rowlocks*.—Not less than four rowlocks attached to the lifeboat by separate chains.

### III-3-5. *Tank Vessels—Liferaft Equipment, All Waters.*

TB/ALL (a) Life rafts shall be equipped as follows:

(b) *Distress Signals*.—One watertight metal case containing 12 self-igniting red lights of same character as distress lights required for life-boats, the container to be of the same material and construction as required for life-boats: *Provided*, That a container of the same material and construction, with a cover of not less than 3 inches in diameter, may be used on life rafts.

(c) *Drinking Cups*.—Two enameled drinking cups.

(d) *Life Line*.—One life line properly secured entirely around the sides and ends of the raft, festooned to the gunwales in bights not longer than 3 feet with seine float in each bight.

(e) *Matches*.—One box of safety matches in a water-tight container.

(f) *Oars*.—Four oars.

(g) *Painter*.—One painter of manila rope not less than 2¾ inches in circumference and a length not less than three times the distance between the boat deck and the light draft.

(h) *Provisions*.—One airtight receptacle containing 2 pounds of provisions for each person. The provisions may be of hard bread or its equivalent in any approved emergency ration of cereal or vegetable compound. No meat or other ration requiring saline preservative shall be allowed. The receptacle shall be of metal fitted with an opening in the top not less than 5 inches in diameter properly protected by a screw cap made of heavy cast brass with machine thread and an attached double toggle, seating to a pliable rubber or felt gasket, which shall insure a tight joint. If the tank vessel is operated on inland waters, no provisions will be required.

(i) *Rowlocks*.—Five rowlocks attached by separate chains.

(j) *Sea Anchor*.—One sea anchor constructed of good quality canvas or other satisfactory material, and, if of circular pattern, shall be not less than 2 feet in diameter.

(k) *Self-Igniting Water Light*.—One self-igniting water light of approved type. (See sec. D-9.)

(l) *Storm Oil*.—One container holding 1 gallon of vegetable or animal oil so constructed that the oil can be easily distributed on the water, and so arranged that it can be attached to the sea anchor.

(m) *Water*.—One watertight receptacle containing 1 quart of water for each person.

### III-3-6. *Equipment for Buoyant Apparatus.*

(a) Buoyant apparatus designed to accommodate 25 persons or more shall be fitted and equipped as follows:

(b) *Life Line*.—One life line properly secured entirely around the sides and ends of the buoyant apparatus, festooned to the gunwales in bights not longer than 3 feet with seine float in each bight.

TB/ALL (c) *Painter*.—One painter of sufficient strength properly secured to the buoyant apparatus so that the buoyant apparatus may be lowered from the deck where stored to the water. It shall be of good quality manila rope not less than 2 inches in circumference and at least equal in length to the height of the boat deck where stored to the vessel's light seagoing draft plus 6 feet.

(d) *Self-Igniting Water Light*.—One self-igniting water light of approved type. (See Sec. D-9.)

Buoyant apparatus designed to accommodate less than 25 persons shall not be required to be equipped with a self-igniting water light. Such apparatus weighing less than 75 pounds shall not be required to have a painter for lowering.

#### SECTION III-4. STOWAGE—LIFEBOATS, LIFE RAFTS, AND BUOYANT APPARATUS

##### III-4-1. Davits and Launching Devices.

T/ALL (a) Tank ships of 100 gross tons or more shall be equipped with davits for each lifeboat carried on the tank ship.

(b) Tank ships of less than 100 gross tons and tank barges where lifeboats are carried shall provide means for the launching of such lifeboats by davits or crane or, where the freeboard is less than six feet when the vessel has no cargo aboard, by slide.

##### III-4-2. Boat Davit Falls.

T/ALL All tankships over 1,000 gross tons shall be provided with covered tubs, boxes, or reels in which to stow the running part of the boat davit falls. Boat falls shall not be painted.

##### III-4-3. Lifeboats and Life Rafts Kept Clear for Launching.

TB/ALL The decks on which lifeboats of any class or life rafts are carried shall be kept clear of freight or any other obstruction that would interfere with the immediate launching of the lifeboats or life rafts.

##### III-4-4. Stowage of the Boats and Rafts.

TB/ALL (a) All the boats and rafts must be stowed in such a way that they can be launched in the shortest possible time and that, even under unfavorable conditions of list and trim from the point of view of the handling of the boats and rafts, it may be possible to embark in them as large a number of persons as possible.

(b) The arrangements must be such that it may be possible to launch on either side of the vessel as large a number of boats and rafts as possible.

#### SECTION III-5. CARE AND INSPECTION—LIFEBOATS, LIFE RAFTS, AND BUOYANT APPARATUS

##### III-5-1. Preparation for Voyage.

TB/ALL (a) Lifeboats, life rafts, and buoyant apparatus shall be fully equipped before the vessel leaves port and the equipment shall remain in the boat, raft, or buoyant apparatus throughout the voyage. It shall be unlawful to stow in any boat, raft, or buoyant apparatus articles other than those herein required.

(b) Loose equipment shall be securely attached to the boat, raft, or buoyant apparatus to which it belongs. Articles of equipment shall be of good quality, efficient for the purpose they are intended to serve, and kept in good condition.

##### III-5-2. Numbering and Marking of Lifeboats.

TB/ALL (a) The number of each lifeboat shall be plainly marked or painted on each side of the bow in figures 3 inches high; and, where lifeboats are carried on both sides of a vessel, the odd-numbered boats shall be stowed on the starboard side and the even-numbered boats on the port side; i. e., lifeboat no. 1 shall be forward on the starboard side, and lifeboat no. 3 next abaft lifeboat no. 1; lifeboat no. 2 shall be forward on the port side and lifeboat no. 4 next abaft lifeboat no. 2, etc.

(b) The cubical contents and number of persons allowed to be carried on each lifeboat shall be plainly marked or painted on each side of the bow in letters and numbers 1½ inches high. In addition, the number of persons allowed shall be plainly marked or painted on the top of at least two of the thwarts in letters and numbers 3 inches high. Such letters and numbers shall be dark on a light ground or light on a dark ground.

##### III-5-3. Marking of Life Rafts.

TB/ALL There shall be stenciled in a conspicuous place on each life raft the number of persons said raft can carry.

##### III-5-4. Overhaul.

TB/ (a) Lifeboats and life rafts shall be stripped, cleaned, painted, and thoroughly overhauled at least once in every year. If any deterioration has begun it shall be corrected even to the extent of renewing that part of the lifeboat or life raft.

(b) The boat davit and falls will be cast loose and overhauled.

##### III-5-5. Maintenance.

TB/ALL (a) Every lifeboat, life raft, or piece of buoyant apparatus together with its equipment shall be kept in every respect in good condition and ready for immediate use.

(b) The material that supports the platform of all life floats shall be examined to determine that its strength is maintained.

(c) Air tanks shall be examined to see that they are in good condition but pressure need not be applied unless the inspector so desires to assure himself as to their condition.

(d) Disengaging apparatus, blocks and falls, if used, shall be determined to be in good condition.

(e) Disengaging apparatus, if used, shall be shown on the annual report and if the inspector is unable to identify it by name he shall take the matter up with the Supervising Inspector of the district in order that such apparatus may be traced for identification and approval record.

##### III-5-6. Licensed Officer in Charge Each Boat.

T/OCLB A licensed officer or able seaman shall be placed in charge of each boat or pontoon raft; he shall have a list of its lifeboat men and other members of its crew which shall be sufficient for her safe management, and shall see that the men placed under his orders are acquainted with their several duties and stations: *Provided*, That if a raft carries 15 persons or less, a licensed officer or able seaman need not be placed in charge of such raft.

##### III-5-7. Certificated Lifeboat Men in Each Boat.

T/OCLB (a) There shall be for each boat or raft a number of lifeboat men at least equal to that specified as follows: If the boat or raft carries 25 persons or less, the minimum number of certificated lifeboat men shall be 1; if the boat or raft carries 26 persons and less than 41 persons, the minimum number of certificated lifeboat men shall be 2; if the boat or raft carries 41 persons and less than 61 persons, the minimum number of certificated lifeboat men shall be 3.

(b) The allocation of the certificated lifeboat men to each boat and raft remains within the discretion of the master, according to the circumstances.

#### SECTION III-6. LIFE PRESERVERS

##### III-6-1. Number Required.

TB/ALL Every tank vessel shall be provided with one good life preserver, having the approval of the Board of Supervising Inspectors, for each and every person carried.

##### III-6-2. Type.

TB/ALL (a) Every life preserver adjustable to the body of an adult person, manufactured after February 10, 1923, shall be of the reversible type, made of suitable material approved by the Board of Supervising Inspectors, with straps properly attached on each side of the body of the life preserver (thus making it reversible), with recesses under the arms, thereby allowing the front and back sections to fit around the upper part of the wearer, and held in place by the straps, and the upper part of the life preserver shall be made vestlike, the whole so constructed as to place the main buoyant body of the device underneath the shoulders and around the body in a manner that it will support the person wearing it in an upright or a slightly backward position.

(b) All such life preservers shall be not less than 52 inches in length when measured laid flat, and every life preserver shall be capable of sustaining for a continuous period of at least 24 hours an attached weight so arranged that whether the said weight be submerged or not there shall be a direct downward gravitation pull upon said life preserver of at least 20 pounds.

## III-6-3. Stowage of Life Preservers.

TB/ALL Life preservers shall be distributed throughout the cabins, staterooms, berths, and other places convenient for each person on such tank vessels.

## III-6-4. Inspection.

TB/ALL (a) At each annual inspection of any vessel, and oftener if deemed necessary, it shall be the duty of the inspectors making the inspection to examine all life preservers in the equipment of such vessel and to satisfy themselves that such life preservers are in accordance with the requirements of the Board of Supervising Inspectors: *Provided*, That when any block of compressed cork used in a compressed cork type life preserver is found to be in a broken or granulated condition such compressed cork block shall be condemned as unfit for further use. When found to be in accordance with the requirements, the inspector shall plainly stamp them with a stamp bearing the word "Passed", his initials, the inspectors' port, and date of approval: *Provided*, That at the annual inspection of a vessel, or oftener if necessary, at least 5 per cent of all kapok life preservers, or such greater number as may be deemed necessary or desirable, shall be subjected to a buoyancy test, as follows: Life preserver containing kapok as buoyant material in the body thereof, if for use of adults, shall be subjected to a test for buoyancy by being entirely submerged for a period of two hours, after which it shall be capable of sustaining in water an attached weight having an actual downward gravitation pull of 20 pounds when the weight is submerged, and kapok life preservers with kapok collars shall be subjected to a similar test, except that the attached weight shall have an actual downward gravitation pull of 28 pounds when the weight is submerged. Any such life preserver failing to meet the required test shall be immediately condemned and removed from the vessel's equipment, and a full detailed report of every such failure shall be immediately forwarded to the supervising inspector of the district having jurisdiction.

(b) Life preservers which depend upon inflation or air compartments for buoyancy, or which are constructed of loose granulated material or any other material not approved by the Board of Supervising Inspectors, shall not be allowed. Any life preserver hereafter approved by the Board of Supervising Inspectors may be accepted in lieu of those specified in this section.

## SECTION III-7. LIFE BUOYS.

## III-7-1. Number Required—Tank Ships.

T/ALL The minimum number of life buoys and the minimum number to which water lights shall be attached is fixed by the following table:

Length of tank vessel	Minimum number of buoys	Minimum number of buoys for which water lights shall be provided
Under 100 feet	2	0
100 feet and under 200 feet	4	2
200 feet and under 300 feet	6	2
300 feet and under 400 feet	12	4
400 feet and under 500 feet	16	6
500 feet and under 600 feet	24	12
600 feet and under 800 feet	30	15
800 feet and over	30	15

## III-7-2. Number Required—Tank Barges.

B/ALL All tank barges regardless of size shall have at least two life buoys on board: *Provided, however* That unmanned barges are exempt from this rule.

## III-7-3. Location.

TB/ALL (a) *Distribution and Securing of Life Buoys.*—All life buoys shall be distributed and secured as follows:

(b) All life buoys shall be so placed as to be readily accessible to the persons on board, and their positions plainly indicated so as to be known to the persons concerned. The buoys shall always be capable of being cast loose, and shall not be permanently secured in any way

(c) One life buoy on each side of a vessel shall have an attached line at least 15 fathoms in length.

## III-7-4. Attachment of Water Lights.

TB/ALL On all tank vessels the self-igniting water lights need not be attached to the ring buoy, but may be placed alongside the buoy which it is intended to serve so that it can be easily and quickly attached to the buoy by means of its lanyard when needed in case of emergency. When self-igniting water lights are not attached to the ring buoys, a snap hook shall be provided for this purpose.

## SECTION III-8. DISTRESS LIGHTS

## III-8-1. Distress Lights.

T/ALL B/OC On every vessel of 150 gross tons and over there shall be carried within the pilot house or upon the navigator's bridge, 12 self-igniting distress lights having a burning capacity of not less than two minutes and to give forth a brilliant red flame of not less than 500 candle power, signals to be treated and made impervious to moisture. The container to be constructed of 18-ounce or No. 22 B. W. G. copper or equal noncorrosive metal, lock jointed, and soldered, bottom to be rolled in and soldered, cover or top to be made of cast brass, not less than one-eighth of an inch thick and 5 inches in diameter, to fit down on rubber gasket to make container water-tight. Cover shall be constructed so as to be easily removed. (Effective July 31, 1930.)

## SECTION III-9. LINE-THROWING GUN

## III-9-1. Requirements—Ocean and Coastwise—Tank Ships.

T/OC (a) All ocean tank ships shall be equipped with a line-carrying gun and equipment auxiliary thereto, as herein specified.

(b) All coastwise tank ships of 150 gross tons and over shall be equipped with a line-carrying gun and equipment auxiliary thereto, as herein specified.

(c) Tank ships of 300 gross tons and over shall be equipped with a mounted-type gun, either breach or muzzle loading; similar in size, performance, and general design to the guns used by the United States Coast Guard.

(d) Tank ships under 300 gross tons may use the so-called "shoulder guns", the requirements of which are set forth in a subsequent section under that heading.

## III-9-2. Line-carrying Gun Equipment for Mounted Guns.

T/OC (a) *Service Projectiles.*—Six service projectiles shall be supplied with each gun. These projectiles shall weigh not less than 17 pounds nor more than 18 pounds each. They shall be smoothly turned and finished and shall have a windage of not more than 0.015 nor less than 0.002 of an inch. The upper end shall carry an eyebolt or shank of sufficient length to project slightly beyond the muzzle. This eye-bolt or shank shall afford an eye for securing the line. Projectiles shall be of such character as to be readily withdrawn from the gun whenever necessary or desirable.

(b) *Service Lines.*—Four service projectile lines shall be supplied with each gun, and shall be not less than seven thirty-seconds of an inch nor more than nine thirty-seconds of an inch in diameter, and at least 1,700 feet long. They shall conform to the following requirements:

1. They shall be either 3-strand soft laid best quality flax or regularly laid best quality manila. Each line shall be in one continuous length without splice, knot or other retarding or weakening feature and have a breaking strain of not less than 500 pounds.

2. The end of the line intended to be attached to the projectile shall have securely attached thereto a substantial tag bearing a permanent legend indicating its purpose; the other end of the line shall be tagged in the same manner to prevent delay in securing proper and immediate action with the equipment.

3. Each line shall be coiled, faked, or reeled in its own faking box or reel in such manner that when all the line leaves the container it shall automatically become unattached and free from the container.

(c) *Line Container.*—The faking box or reel shall be of such size as to accommodate the size and type of line used. The faking box shall have a frame slightly larger than the box with a row of wooden pins set vertically into its four sides. It shall have a false bottom which shall be a tablet of wood pierced with holes corresponding to the pins and shall fit down over the pins until it reaches their base and rests on the frame. The frame shall be equipped with proper hooks for securing it to the box after the line has been faked on the pins. The reel type container shall consist of a reel upon which the line may be readily coiled and a canister or container into which the coiled line may be placed which will afford a fair lead through which the line may pay out. The reel must be so designed as to permit easy withdrawal after the line has been coiled.

(d) *Statement of Manufacturer.*—The container of the line shall bear the name of the manufacturer and a statement to the effect that in all respects the line meets the requirements specified in paragraph (b), 1, 2, and 3, for service lines.

(e) *Primers.*—Primers used with the breech-loading gun shall be of the percussion type. Primers used with the muzzle-loading gun shall be of the friction type. At least 25 primers shall be carried at all times.

(f) *Auxiliary Line.*—At least 1,500 feet of 3-inch manila line shall be carried by vessels of over 300 gross tons. This line shall be considered as part of the line-carrying gun equipment and shall be maintained in first-class condition at all times.

(g) *Accessibility.*—The line-carrying gun and its equipment shall be kept always easily and immediately accessible and ready for use. No part of this equipment shall be used for any other purpose.

### III-9-3. Line-Carrying Gun Equipment for Shoulder Gun.

T/OC (a) *Type.*—The shoulder line-carrying gun shall be a breech-loading gun of 0.45 or 0.50 caliber, chambered for blank rifle cartridges, smooth bored and properly stocked. It shall be contained in a suitable case, together with the following equipment: 3 shot lines, 10 projectiles, 25 cartridges, 1 cleaning rod, 1 can of oil, and 1 book of instructions, and conform to the following requirements.

T/OC 1. The projectiles shall be machined from steel or bronze, weigh about 8 ounces, and have a shank of sufficient length to project slightly beyond the muzzle. The shank shall be made in one with the projectile and have at its upper end an eye for securing the line.

2. The line shall be at least 400 feet in length and have a circumference of about three-eighths of an inch. It shall be woven, or laid up, of cotton or flax and be very flexible, and have a breaking strain of not less than 250 pounds. It shall be made up, or coiled in such way as to render it ready at all times for immediate use, the coil or other device to permit the free running of the line when the gun is fired.

(b) *Auxiliary Line.*—At least 500 feet of 3-inch manila line shall be carried as an auxiliary line for use with the shoulder line-carrying equipment. This line shall be considered as part of the shoulder gun line-carrying equipment and maintained in first-class condition at all times.

(c) *Accessibility.*—The shoulder gun line-carrying equipment shall be kept always easily and immediately accessible and ready for use and no part of this equipment shall be used for any other purpose.

(d) *Test.*—The projectile shall be thrown, under conditions of a reasonably still atmosphere, for a distance of not less than 250 feet without fouling or breaking the line.

### III-9-4. Service Recommendations.

T/OC (a) *Mounted Type.*—The following precautions and procedure are recommended for the use of mounted type line-carrying guns and equipment:

1. Service powder charge should be about 5 ounces, and the powder bags should be furnished to the vessel containing not more than that quantity of black powder. Under extraordinary circumstances, 8 ounces may be used.

2. In making the line fast to the shank, pass it through the eye and take three or more half-hitches around its own part, leaving a loop of about 10 or 12 inches and taking the hitches about 6 inches apart. This will allow the line to slip slightly through the eye of the shank before the hitches fetch up, thus easing the strain on the line at the loop during the initial acceleration.

3. A considerable bight lead over the side is recommended wherever possible, as it will tend to lessen the jerk on the line at initial acceleration.

4. At least a fathom of the line from the shank should be thoroughly wet before using to prevent burning.

5. The faking box or reel should always be faced in the direction of the line of fire and placed abreast of the gun and as close to the ship's side as possible. It is not advisable to place the line too close to the muzzle of the gun, as the concussion may lift several layers or coils from the top, causing a snarl which in turn may cause the line to part.

6. Care should be taken in placing the equipment to prevent fouling of the line in rigging, ridge ropes, etc., which have a tendency to rise or jump up when the gun is fired.

7. Having made the gun and equipment ready for use, the following procedure in firing is recommended:

Select a place where the gun may recoil without striking anything, or where it may be securely lashed down.

Note the position of the vessel to be relieved, her distance, and the direction and approximate force of the wind, and then place the gun in position, making allowance for the drift of the line. Place the line on the windward side of the gun and about 3 feet from it.

Make the line fast in the eye of the shank and insert the powder charge projectile, and primer. In loading, make sure that the projectile is seated against the wad.

8. After using, the lines should be thoroughly dried before rewinding or faking.

(b) *Shoulder Type.*—In using the shoulder line-throwing type gun, the following precautions should be observed:

1. Care should be taken to prevent fouling of the line in rigging, ridge ropes, etc., which have a tendency to rise or jump up when the gun is fired.

2. The projectile should be seated in the end of the cartridge case.

3. If fired near the ship's side, the gun must be held firmly to prevent it from "jumping" overboard.

4. The line should be wet thoroughly for 2 or 3 feet from the shank to prevent burning.

5. The use of a "reduced load" cartridge is recommended, containing 50 grains of powder instead of 70.

6. After using, the line should be thoroughly dried before rewinding or faking.

7. In using this equipment the instructions furnished by the manufacturer shall be followed.

### III-9-5. Placard Instructions.

T/OC A placard with instructions for using the gun apparatus, as practiced by the United States Coast Guard, shall be posted in the pilot house and engine room, and seamen's, firemen's, and stewards' departments of every vessel required by law to carry such gun apparatus.

## RULES FOR TANK VESSELS

### RULE IV

#### [Outline of Sections]

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#### RULES FOR TANK VESSELS

##### RULE IV

#### Fire-Fighting Equipment for Tank Vessels

##### SECTION IV-1. INSPECTION OF FIRE-FIGHTING EQUIPMENT

###### IV-1-1. Inspection of Fire-Fighting Equipment—General.

TB/All At each annual inspection, and at any other time as required in the judgment of the local inspectors, all fire-fighting equipment on tank vessels shall be inspected.

###### IV-1-2. Inspection by Both Inspectors.

TB/ALL The inspection of fire-fighting equipment shall be made jointly by both boiler inspector and hull inspector.

###### IV-1-3. All Fire Equipment May be Tested.

TB/All During the inspection of fire-fighting equipment the local inspectors may require fire apparatus to be tested, and used, except as provided under IV-3-6 (b) and IV-5-4.

###### IV-1-4. Testing of Fire Hose and Pumps.

TB/All It shall be the duty of both the hull and boiler inspectors to examine all pumps, hose, and other fire apparatus and to see that the hose is subjected to a pressure of 100 pounds to the square inch, and that the hose couplings are securely fastened in accordance with these regulations.

###### IV-1-5. Inspection of Bilges.

TB/ALL When inspecting oil-burning vessels, either internal-combustion type or steam-driven type, the inspector shall examine the tank tops and bilges in the fire room and engine room to see that there is no accumulation of oil which might create a fire hazard.

###### IV-1-6. Special Types of Fire Apparatus May Be Used.

TB/ALL Any special type of appliance, fire-extinguishing medium, or arrangement approved by the Board of Supervising Inspectors may be used.

###### IV-1-7. Fire Equipment—Now and Existing Vessels.

TB/ALL All tank vessels subject to these regulations shall have fire extinguishers and fire extinguishing apparatus in accordance with these regulations: *Provided, however* That all fire extinguishers and fire extinguishing apparatus which is of the character that complied with the rules and regulations of the Board of Supervising Inspectors, pursuant to Title 52 of the Revised Statutes, on vessels in existence at

the time these regulations are promulgated, and have been in use on such vessels, may be approved by the local inspectors, provided such existing fire extinguishers and such fire fighting apparatus are found to be in good and workable condition. Where such existing fire extinguishers and fire fighting apparatus are not found to be in good and workable condition, they shall be repaired or else replaced by fire extinguishers or fire fighting apparatus of the latest approved type, as required by these regulations. Where such existing fire extinguishers or fire fighting apparatus are found to be in good and workable condition but deficient as to quantity or numbers, the additional quantity or numbers required by these regulations shall be of the latest approved type. Fixed systems which are included in the fire fighting equipment for tank vessels and which have been in the past approved by the Bureau shall be deemed to comply with these regulations both as to character and quantity, provided such systems are in good and workable condition.

###### IV-1-8. Repairs and Alterations to Fire-Fighting Equipment.

TB/ALL No extensive repairs or alterations, except in emergency shall be made to any fire-extinguishing apparatus, or other appliance subject to inspection, without advance notice to the local inspectors. Such repairs or alterations shall so far as is practicable be made with materials and tested in the manner specified within those rules for new construction. Emergency repairs or alterations shall be reported as soon as practicable to the local inspectors in the district where the vessel may call after such repairs are made.

##### SECTION IV-2. FIRE PUMPS, MAINS, HYDRANTS, AND HOSE

###### IV-2-1. Fire Pumps Required.

TB/ALL (a) All tank ships shall be provided with pumps available for use as fire pumps, as follows:

(b) Tank ships of 500 gross tons and under shall be equipped with an efficient hand pump capable of delivering 50 gallons per minute or a power-driven pump of equivalent capacity.

(c) Tank ships of more than 500 gross tons shall be provided with independently driven power pumps as specified in the following table:

Over 500 and not over 1,000 gross tons.....	1 pump.
Over 1,000 gross tons.....	2 pumps.

###### IV-2-2. Capacity of Fire Pumps.

T/ALL (a) The capacity of the combined fire pump installation shall be  $\frac{1}{2}$  gallon per minute per gross ton of the tank ship. The maximum total fire pump capacity required for any tank ship shall be 800 gallons per minute.

(b) Pumps on tank ships of 1,000 gross tons or over shall be capable of delivering water through the highest outlets at a minimum pressure of 50 lbs. per square inch at the hose nozzle when the pumps are delivering their rated capacity.

(c) While arranged with permanent connections to the fire main the pumps may be utilized also for other purposes, provided that one of the required pumps is kept available for immediate use on the fire system. In no case, however, shall a pump having connection to oil lines be used as a fire pump.

###### IV-2-3. Type of Fire Pumps.

T/ALL (a) Tank ships are not restricted to any particular type or proportions for fire pumps.

###### IV-2-4. Location of Fire Pumps.

T/ALL On oil-burning tank ships, provided with two fire pumps, where the engine and fire rooms are not entirely separated by iron or steel bulkheads, or if fuel oil can drain from fire-room bilges into the engine room, one of the fire pumps shall be located in an accessible space separate from the machinery compartment.

###### IV-2-5. Fire Pump Relief Valves, Piping, and Marking of Valves.

T/ALL (a) Fire pumps shall be equipped on the discharge side with a relief valve set to relieve at 125 pounds per square inch, and a pressure gage to indicate the pressure on the fire main.



(b) Suction pipes for all fire pumps shall be so arranged as to have an area of opening sufficiently large to supply water when the pumps are working at full capacity.

(c) The size of the discharge pipe leading from fire pumps shall in no case be less than that of the discharge opening of the pump, and in no case shall it be less than 1½ inches in internal diameter.

(d) The pipe, valves, fittings, and construction of fire lines shall conform to Rule II, 51 Supplement, Section 19—"Piping Systems."

(e) The valves on steam and carbon dioxide fire extinguishing systems shall be plainly marked to indicate the compartment into which they discharge.

#### IV-2-6. Fire Hydrants.

T/ALL (a) Fire hydrants shall be of a sufficient number and so arranged that any part of the living quarters, weather decks, and any parts of cargo decks accessible to the crew while at sea may be reached with a single 50-foot length of hose.

(b) Hose connections shall be brass or composition.

(c) Outlet openings shall have a diameter of not less than 1½ inches.

(d) All fire hydrants shall be equipped with hose spanners.

#### IV-2-7. Fire Hose.

T/ALL (a) Fire hose shall be connected to the outlet at all times except on open decks where the location of the fire hydrants is such that no protection is afforded for the hose in heavy weather.

(b) The fire hose may be temporarily removed when it will interfere with the handling of cargo.

(c) Each fire hose shall be provided with a suitable nozzle.

(d) Fire hose, when part of the fire equipment, shall not be used for any other purpose than fire extinguishing, fire drills, and testing.

(e) Fire Hose shall be drained and stowed in its proper place immediately after being used.

### SECTION IV-3. FIRE EQUIPMENT FOR CARGO SPACES, ETC.

#### IV-3-1. General Requirement.

T/ALL Every tank ship shall be provided with suitable pipes and valves attached to the boiler to convey steam into the hold and to different compartments thereof to extinguish fire, or such other suitable apparatus as may be prescribed by the regulations of the Board of Supervising Inspectors with the approval of the Secretary of Commerce.

#### IV-3-2. Systems Which May be Substituted for Steam.

T/ALL On tank ships, foam, gases, or vapors, or any other effective fire extinguishing system may be substituted for steam, provided such system, if fixed, is completely installed in accordance with approved drawings and specifications. Such systems may be portable, semi-portable, or fixed, and may be of more than one type provided its total capacity equals the requirements of these regulations.

#### IV-3-3. Minimum Capacity of Fire-Extinguishing Systems for Cargo Spaces.

T/ALL (a) For Steam, Inert Gases, and Vapors: The minimum capacity of fire systems for cargo spaces shall be based upon the volume of the largest cargo compartment in cubic feet, which shall be determined by measurements taken between fire-retarding boundaries such as decks, shells, tank bottoms, and bulkheads.

(b) For Foam: The minimum capacity of fire systems for cargo spaces shall be based upon the largest superficial liquid area obtainable in any tank within the range of usual trim.

#### IV-3-4. Basic Requirements of Fire-Extinguishing Systems for Cargo Spaces.

T/ALL (a) Steam: Steam for fire-extinguishing systems shall be available from the main boilers or from a donkey or auxiliary boiler or from a shore source having a minimum capacity equivalent to 1 square foot of heating surface for each 300 cubic feet of the largest compartment in which cargo is carried. This requirement shall be based upon a

rate of evaporation of 6 pounds of steam per hour per square foot of heating surface from and at 212° F. medium steaming. Equivalent values of heating surface will be permitted for boilers having rates of evaporation differing from that herein specified.

(b) Inert Gases and Vapors: At least one pound of carbon dioxide or its equivalent of other inert gas or vapor for each 30 cubic feet of gross volume of the largest cargo compartment as defined in IV-3-3 (a), discharged at the rate of one pound of carbon dioxide or its equivalent of other inert gas per minute for each 500 cubic feet of cargo space.

(c) Foam.—At least a six-inch layer of foam delivered uniformly over the largest superficial liquid area as defined in IV-3-3 (b); discharged at the rate of not less than 10 cubic feet of foam per minute per 100 square feet of surface to be covered.

T/ALL (d) Provision Against Freezing.—Provision shall be made for draining the manifolds and individual lines of fire-extinguishing systems for cargo spaces to protect them against freezing.

#### IV-3-5. Steam Fire Extinguishing System for Cargo Spaces.

T/ALL (a) A steam pressure of at least 100 lbs. per square inch shall be maintained for fire-extinguishing purposes. Where the maximum allowable boiler working pressure will not permit of this, or where steam from a shore plant is being used, the maximum steam pressure permitted by the operating boiler pressure limitations shall be provided for this purpose.

(b) Where steam fire-extinguishing systems are fitted on tank ships the control valve shall be housed in a fire-resisting compartment located in an accessible place on the weather deck in order to protect the operator from fire and smoke. The main lines shall have sufficient area to supply all the individual lines to the largest tank and the tanks adjacent thereto, and the valves on the branch lines to the tanks shall be left open at all times so that, in case of fire, it will be necessary only to open the master valve to insure a flow of steam into each hold or tank, after which the valves leading to tanks which are not on fire may be closed: *Provided*, That where the opening of such branch line valve may cause contamination of cargo or cause the passage of gases or vapors between tanks or compartments they may be kept closed.

(c) Steam smothering lines shall be tested with at least 50 pounds of air pressure or by blowing steam through the lines and a survey made for detecting corrosion and defects, using hammer test or such other means as may be necessary.

(d) The minimum diameter of any steam fire extinguishing pipe to any fuel oil tank shall be one inch.

#### IV-3-6. Inert Gas or Vapor Fire Extinguishing Systems for Cargo Spaces.

T/ALL (a) The piping for inert gas or vapor fire-extinguishing systems shall comply with the requirements of Sup. 51, Rule 2, Sec. 19.

(b) At annual inspections, all carbon dioxide (CO<sub>2</sub>) cylinders, whether fixed or portable, shall be examined externally and replaced if any corrosion is found; and they shall also be checked by weighing to determine their contents, and if found to be more than 10 percent under the required contents of carbon dioxide, they shall be recharged.

#### IV-3-7. Foam Fire-Extinguishing Systems for Cargo Spaces.

T/ALL (a) The piping for foam fire-extinguishing systems shall comply with the requirements of Sup. 51, Rule 2, Sec. 19.

(b) If the foam system is of the fixed type the apparatus and chemicals shall be contained in a fire-resistant compartment protected from the weather and where the operator will be shielded from fire and smoke.

(c) If the foam system is of the portable type the apparatus and chemicals shall be stowed in a readily accessible place protected from the weather.

#### IV-3-8. Flue Gas Fire-Extinguishing Systems for Cargo Spaces.

T/ALL Inert gas system for extinguishing fires in cargo spaces, where the source of inert gas is the stack or a furnace

for producing such inert gas shall be considered as complying with these regulations, provided such system shall have the approval of the Bureau as required in Section IV-3-2 of these regulations.

#### IV-3-9. Fire Extinguishing Systems for Lamp and Paint Rooms, Etc.

T/ALL The steam, inert gas or vapor, or foam system for extinguishing fires in cargo spaces shall be so arranged that it may be used for extinguishing fires in lamp, oil, and paint rooms, and such rooms and compartments in all classes of vessels shall be wholly and tightly lined with metal.

#### IV-3-10. Shutting Down of Boilers and Machinery.

T/ALL The fire-extinguishing systems provided for in Rule IV which depend for their operation on the ship's boilers or machinery shall not be required to be immediately available at docks or at anchorages.

### SECTION IV-4. FIRE AXES

#### IV-4-1. Fire Axes Required.

T/ALL All tank ships shall be provided with fire axes as follows:

Gross Tons:	Fire axes required
Not over 50	1
Over 50 and not over 200	2
Over 200 and not over 500	3
Over 500 and not over 1,000	4
Over 1,000	5

#### IV-4-2. Location and Use of Fire Axes.

T/ALL All fire axes shall be located so as to be readily found in time of need, shall not be used for general purposes, and shall be kept in good condition.

### SECTION IV-5. HAND FIRE EXTINGUISHERS

#### IV-5-1. Hand Fire Extinguishers—Test of.

TB/ALL Every type of fire extinguisher provided for and required by this section shall be tested by the Bureau of Standards, Department of Commerce, and a report made by that bureau to the Board of Supervising Inspectors, which shall then determine whether the said extinguisher shall be approved for use on vessels subject to inspection.

#### IV-5-2. Hand Fire Extinguishers—Marking of.

TB/ALL Every fire extinguisher approved after May 31, 1921, for use on vessels under the jurisdiction of the Bureau of Navigation and Steamboat Inspection shall have affixed thereto a metallic name plate having plainly stamped thereon the name of the fire extinguisher, the rated capacity in gallons, quarts per pounds, and the name and address of the person or firm for whom approved.

#### IV-5-3. Hand Fire Extinguishers—Location of.

TB/ALL Hand fire extinguishers shall be located in such parts of the tank ship as in the judgment of the local inspectors will be most convenient and serviceable in case of emergency and so arranged that they may be easily removed from their fastenings.

#### IV-5-4. Hand Fire Extinguishers—Inspection of.

TB/ALL Every fire extinguisher shall be discharged and examined at each annual inspection. Provided, That carbon tetrachloride fire extinguishers shall be tested for their pumping efficiency and the liquid discharged with proper care so that it may be replaced in the extinguishers. Carbon dioxide fire extinguishers shall be checked by weighing to determine contents, and, if found to be more than 10 per cent under required contents of carbon dioxide, they shall be recharged.

#### IV-5-5. Hand Fire Extinguishers—Spare Charges and Parts.

TB/ALL (a) Extra charges shall be carried on board for 50 percent of each class of fire extinguishers required. If 50 percent of each class of fire extinguishers carried gives a fractional result, extra charges and extra safety valve units shall be provided for the next largest whole number: Provided, That extra charges for carbon dioxide type fire extinguishers, shall be considered either an additional carbon

dioxide extinguisher or a 2½ gallon foam extinguisher and for this 2½ gallon foam extinguisher no extra charge will be required.

(b) Recharges, particularly the acid used in charging soda-and-acid type of fire extinguisher, must be packed in such manner that the filling operation (i. e., in recharging the extinguisher) can be performed without subjecting the person doing the recharging to undue risk of acid burns and shall be contained in Crown stopper type of bottle.

(c) Extra safety valve units shall be carried on board for 50 percent of all hand fire extinguishers of the foam type.

#### IV-5-6. Hand Fire Extinguishers—Number Required on Tank Ships.

T/ALL (a) Tank ships of over 15 gross tons having hulls constructed of metal with metal superstructures shall be provided with chemical fire extinguishers as follows:

Size of Vessel, Gross Tons:	Minimum No. of Fire Extinguishers
Over 15 and not over 100	1
Over 100 and not over 300	2
Over 300	3

(b) Tank ships of over 15 gross tons constructed of wood or with hulls constructed of metal with wood superstructures shall be provided with chemical fire extinguishers as follows:

Size of Vessel, Gross Tons:	Minimum No. of Fire Extinguishers
Over 15 and not over 75	1
Over 75 and not over 200	2
Over 200 and not over 500	3
Over 500	4

(c) The above tables are based on the ordinary 2½ gallon foam type fire extinguisher; other types of fire extinguishers may be substituted according to the following schedule:

One 2½ gallon foam type is equivalent to one 15 lb. carbon dioxide (CO<sub>2</sub>) type, or two 1 quart carbon tetrachloride type.

(d) No fire extinguisher of capacity greater than 2½ gallons (or equivalent sizes of other types) shall be allowed a greater rating than the ordinary 2½ gallon size, but fire extinguishers of less capacity are allowable under the above tables when their total contents equal the required quantity on tank ships.

#### IV-5-7. Hand Fire Extinguishers Required on Tank Vessels Using Oil as Fuel.

TB/ALL (a) In fire rooms or engine rooms.—At least two 2½ gallon foam type fire extinguishers or their equivalents, as required in IV-5-6 (c), shall be provided in each fire room and in each engine room which contains internal combustion engines. On tank ships these fire extinguishers shall be in addition to those provided for in IV-5-6.

(b) Where gasoline is carried in a separate storage tank for use in an auxiliary lighting or wireless unit, or work boats, at least two 2½ gallon foam type fire extinguishers or their equivalents as required in IV-5-6 (c), shall be provided and such fire extinguishers shall be located within 5 feet of the gasoline storage tank.

### SECTION IV-6. SAND BOXES REQUIRED ON TANK VESSELS USING OIL AS FUEL UNDER BOILERS

#### IV-6-1. Sand Boxes Required.

TB/ALL (a) Tank vessels of 500 gross tons and under using oil as fuel under boilers may be fitted with metal tanks, in the space where such oil is used, containing 25 gallons of sand and a scoop and such tank, sand, and scoop when so provided may be considered as replacing one of the fire extinguishers required under IV-5-7 (a).

(b) Tank vessels of over 500 gross tons using oil as fuel shall be fitted with metal tanks, in the space where such oil is used, containing 50 gallons of sand and a scoop.

### SECTION IV-7. FIRE-EXTINGUISHING EQUIPMENT REQUIRED ON TANK BARGES

#### IV-7-1. Portable Extinguishing Equipment.

TB/ALL (a) All tank barges of 100 gross tons and over, whose certificate requires that they be manned, shall be

equipped with approved chemical, inert gas, or foam in the following quantities:

- 33 gallons of foam, or
- 200 lbs. of carbon dioxide, or
- 7 gallons of carbon tetrachloride.

This is in addition to the hand extinguishers required in IV-7-2.

(b) The above equipment may be either portable or equipped with sufficient lengths of hose or piping to deliver the extinguishing agent to any point on deck or in the crew's accommodation. If portable extinguishers are used each unit must weigh less than 50 lbs. Extinguishers shall be located in protected and accessible places but not immediately adjacent to cargo tank hatches and openings.

#### IV-7-2. Hand Fire Extinguishers.

B/ALL (a) Each tank barge whose certificate requires that it be manned, and each unmanned tank barge with pump room, shall be provided with approved hand extinguishers located in or adjacent to the entrance of spaces, as follows:

- Living Accommodations.
- Galley.
- Pump Room.
- Pump Engine Room.
- Fire Room.

The fire extinguishers at each location shall be not less than one of the equivalent amounts as follows:

- 2½ gallons of foam, or
- 15 lbs. of carbon dioxide, or
- 2 qts. of carbon tetrachloride.

In no event shall a manned tank barge, or an unmanned tank barge with pump room, be provided with less than one of the equivalent quantities, as follows:

- 5 gallons of foam, or
- 30 lbs. of carbon dioxide, or
- 4 quarts of carbon tetrachloride.

B/R (b) Unmanned tank barges not provided with pump rooms, which carry Grade A, B, or C liquids and which operate exclusively on rivers tributary to the Gulf of Mexico in flotilla and in actual physical contact with each other and/or a towing vessel, need not be equipped with individual fire-extinguishing apparatus: *Provided*, That the regular equipment of the towing vessel shall include portable or semi-portable fire-extinguishing apparatus of a capacity equivalent to 15 lbs. of carbon dioxide, or one 2½ gal. foam extinguisher, for each barge without pump room in the flotilla.

#### RULES FOR TANK VESSELS

##### RULE V

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#### RULES FOR TANK VESSELS

##### RULE V

##### Operation of Tank Vessels

##### SECTION V-1. GENERAL

#### V-1-1. Licensed Officers and Crews of Tank Ships.

T/ALL (a) No tank ship of the United States shall be navigated unless she shall have in her service and on board such complement of licensed officers and crew, including certificated lifeboat men (and certificated special cargo-tank vessel where required by these regulations), separately stated, as called for in its certificate of inspection.

T/ALL (b) There shall be a duly licensed Master on board every tankship of more than 150 gross tons, whenever such tankship is under way.

T/LBR (c) The navigation of every tank ship above 150 gross tons shall be under the control of a first-class pilot, and every such pilot shall be limited in his license to the particular service for which he is adapted.

T/LBR (d) A first-class pilot or a second-class pilot who has reached the age of 21 years may act as master or pilot in charge of the navigation of a tank ship not exceeding 150 gross tons. A second-class pilot is authorized to act as pilot in charge of a watch on any tank ship within the tonnage specified in his license.

#### V-1-2. Physical Condition of Crew.

TB/ALL No person shall be engaged as member of the crew on a tank vessel if he is known by the employer to be physically or mentally incapable of performing the duties assigned to him.

#### V-1-3. Illness, Alcohol, Drugs, Etc.

TB/ALL No person, known by the party in charge of a tank vessel to be under the influence of liquor or other stimulant, or to be ill to such an extent as to unfit him for any particular service on the tank vessel, shall be allowed to perform such service while in such condition.

#### V-1-4. Certificate of Discharge.

Each member of crew on termination of service shall, upon request, receive from the Master or captain of a vessel, a letter of discharge stating therein his service, character, and ability.

#### V-1-5. Watchman.

B/CBLR (a) *Manned Barge*.—At least one member of the crew of a manned tank barge shall be on board at all times except when the vessel is gas-free or is laid up at a dock or terminal at which watchman service is provided.

(b) *Unmanned Barge*.—Any normally unmanned barge or barge flotilla of more than one barge in actual physical contact with each other shall have at least one watchman aboard at all times except when gas-free or when laid up at a dock where watchman service is provided or when being operated singly or in flotilla, accompanied by a towing vessel in actual contact with the flotilla. These watchmen may be members of the regular complement of the towing vessel.

#### V-1-6. Station Bills, Muster Lists, and Line-Throwing Gun Drills.

T/ALL It shall be the duty of the master of every tankship over 500 gross tons to cause station bills and muster lists to

be prepared before the vessel sails which shall be signed by the master who shall be responsible for their preparation. The station bills and muster lists shall be posted in conspicuous places in several parts of the tankship, particularly in the crew's quarters, and must contain full particulars of the signals which will be used for calling the crew to their stations for emergency duties. Special duties shall be allotted to each member of the crew and the muster lists shall show all these special duties and indicate the station to which each man must go and the duties he has to perform. The special duties should, as far as possible, be comparable to the regular work of the individual.

The duties provided for by the muster lists should include:

(a) The closing of airports, watertight doors, fire doors, and fire screens, the covers and all valves of all scuppers, sanitary and other discharges which lead through the ship's hull below the margin line, and stopping the fans and ventilating systems.

(b) The extinction of fire.

(c) The equipment of boats, rafts, and buoyant apparatus and their preparation for launching.

(d) The master of a tankship equipped with a line-carrying gun shall drill his crew in its use every three months, but under no consideration should the gun be fired on account of the hazard that may exist. Each drill shall be recorded in the ship's log book.

#### V-1-7. Carriage of Persons other than Crew.

TB/ALL No person not connected with the operation of a tankship or tank barge or not having legitimate business with said vessel, shall be permitted aboard while vessel is under way unless specifically allowed by its certificate.

#### V-1-8. Emergency Signals—Fire and Boat Drills.

T/ALL (a) The general fire alarm signal shall be a continuous rapid ringing of the ship's bell for a period not less than 10 seconds supplemented by the continuous ringing of the general alarm bells for not less than 10 seconds. For dismissal from fire alarm stations, the general alarm bells shall be sounded 3 times, supplemented by 3 short blasts of the whistle. The signal for boat drill or boat stations shall be more than 6 short blasts and 1 long blast of the whistle, supplemented by the same signal on the general alarm bells. Where whistle signals are used to direct the handling of boats they shall be as follows:

To lower boats one short blast of the whistle.

To stop lowering the boats two short blasts of the whistle.

For dismissal from boat stations three short blasts of the whistle:

Provided, That on river vessels the whistle signals specified herein may be made on the ship's bell.

(b) The master of any tankship may establish such other emergency signal, in addition to the above, as will provide that all the officers and all the crew of the vessel will have positive and certain notice of the existing emergency.

(c) The master may organize a squad to be used for emergency duties (other than a general emergency), or crew practices, and the nature of the signals or other means for assembling the squad remains within the discretion of the master. Such signals should not conflict with the navigational signals or the signals used for a general alarm.

(d) It shall be the duty of the master, or the mate, or officer next in command, once at least in each week, to call all hands to quarters and exercise them in discipline, and (weather permitting) in the unslashing and swinging out of the lifeboats, the closing of all hand- or power-operated watertight doors which are in use at sea, closing all fire doors and fire screens, the use of fire pumps, and all other apparatus for the safety of life on board of such vessels with special regard for the drill of the crew in the method of adjusting life preservers, and to see that all the equipments required by law are in complete working order for immediate use; the fact of exercise of the crew, as herein contemplated, shall be entered upon the vessel's log book.

(e) The rule relating to fire and boat drills contemplates that such drills shall be conducted precisely as though an emergency existed. To accomplish the purpose of the rule, lifeboat covers and strongbacks shall be removed, plugs or

caps put in place, boat ladders secured in position for use, painters carried forward and secured so as to provide a good lead and slack to hold the boat in position under the davits when in the water. The person in charge of each lifeboat or life raft should have a list of its crew and should see that the men under his orders are acquainted with their several duties. The hand pumps and fire pump shall be operated long enough and a sufficient number of outlets used to insure that such equipment is in order and effectual. The motor and the hand-operated propeller gear of each lifeboat shall be operated for a period of not less than 5 minutes once at least in every 7 days, in order that it may be ready for service at any time. Such operation shall be made a part of the report of such drill. When oxygen-breathing apparatus, gas masks, or other special equipment is carried, certain members of the crew shall be trained in the use of the equipment.

(f) The entries in the vessel's log book relating to the exercise of the crew in fire- and boat-drills shall state the day of the month and the hour when so exercised, length of time of the drill, number of the boats swung out, number of lengths of hose used, and a statement of the condition of all fire- and life-saving apparatus.

(g) Any neglect or omission on the part of the officer in command of such vessels to strictly enforce the provisions of this rule, shall be deemed cause for suspension or revocation of the license of such officer.

(h) It shall be the duty of the master to require the officers and crew of all such vessels to perform the aforesaid drills and discipline in the presence of said inspectors at intervals sufficiently frequent to assure the said inspectors, by actual observance, that the foregoing requirements of this section are complied with.

(i) A copy of this section shall be furnished each vessel to which this section applies, to be framed under glass and posted in conspicuous places about the vessel.

#### V-1-9. Shipping Papers.

TB/ALL (a) Each loaded tank vessel shall have on board a bill of lading, manifest or shipping document giving the name of the shipper and the location of shipping point, the name of the consignee and the location of the delivery point, the grade and approximate quantity of each grade of cargo, and for whose account the cargo is being handled. The tank vessel shall not be delayed in order to secure exact quantities of cargo. Such manifests or bills of lading may be made out by the master, master of the towing vessel, owner, or agent of the owner.

#### V-1-10. Sanitary Condition.

T/ALL It shall be the duty of the master and chief engineer of every tankship to see that such vessel and crew's quarters are kept in a sanitary condition. Failure on the part of the master (or chief engineer so far as it applies to the engineer's department) of every tankship to observe and carry into effect this section shall be sufficient cause for the suspension of his license on a charge of inattention to his duties.

### SECTION V-2. NAVIGATION

#### V-2-1. Notice to Mariners—Aids to Navigation.

T/ALL (a) Licensed officers are required to acquaint themselves with the latest information published by the Department of Commerce regarding aids to navigation, and neglect to do so is evidence of neglect of duty. It is desirable that vessels navigating oceans and coastwise and Great Lakes waters, shall have available in the pilot house for convenient reference at all times, a file of the Department of Commerce weekly, Notice to Mariners.

(b) Notice to Mariners, published weekly by the Department of Commerce, which contains announcements and information regarding aids to navigation and charts of waters of the United States, is available for free distribution at the following places: Marine Division, Customhouse; Local Inspectors, Bureau of Navigation and Steamboat Inspection; Shipping Commissioners; U. S. Coast and Geodetic Survey field stations; and offices of the Superintendent of Lighthouses.

**V-2-2. Draft.**

T/OC (a) The master of every tankship shall, whenever leaving port, enter the maximum draft of his vessel in the log book.

**V-2-3. Steering Gear Test.**

T/ALL (a) On all tankships making voyages of more than 48 hours' duration, the entire steering gear, the whistle, the means of communication and the signalling appliances between the bridge or pilot house and engine room shall be examined and tested by a licensed officer of the vessel within a period of not more than 12 hours before leaving port. All such vessels making voyages of less than 48 hours' duration or operating on lakes, bays, sounds, and rivers shall be so examined and tested at least once in every week. The fact and time of such examination and test shall be recorded in the ship's log book.

**V-2-4. Steering Orders.**

TB/ALL (a) Effective January 1, 1936, for all Ocean and Coastwise Tank Vessels fitted with rudders, and effective January 1, 1937, for all other tank vessels fitted with rudders, the following steering orders shall be given in the direct sense as follows:

(b) "Right Rudder" shall be given only when it is intended that the wheel, the rudder blade and the head of the ship should go to the Right. "Left Rudder" shall be given only when it is intended that the wheel, the rudder blade, and the head of the ship should go to the Left.

(c) Where rudder indicators are provided they shall be installed consistent with the foregoing.

**V-2-5. Lookouts.**

T/OC All vessels navigating the ocean during the night time shall have a lookout at all times at or near the bow. Nothing in this rule shall exonerate any master or officer in command from the consequences of any neglect to keep a proper lookout or the neglect of any precaution which may be required by the ordinary practice of seamen or by the special circumstances of the case.

**V-2-6. Unauthorized Lights.**

T/ALL Any master or pilot of a tankship who shall authorize or permit the carrying of any light, electric or otherwise, not required by law, on the outside structure of the cabin or hull of the vessel that in any way will interfere with distinguishing the signal lights shall, upon conviction thereof before any board of inspectors having jurisdiction, be deemed guilty of misconduct and shall be liable to have his license suspended or revoked.

**V-2-7. Searchlight.**

T/ALL Any master or pilot of a tankship who shall flash or cause to be flashed the rays of the searchlight into the pilot house of a passing vessel shall be deemed guilty of misconduct and shall be liable to have his license suspended or revoked.

**V-2-8. Whistling.**

T/ALL Unnecessary sounding of the vessel's whistle is prohibited within any harbor limits of the United States. Whenever any licensed officer in charge of any tankship authorizes or permits such unnecessary whistling, upon conviction thereof before any board of inspectors having jurisdiction, such officer shall be suspended from acting under his license as the inspectors trying the case may deem proper.

**V-2-9. Reports of Accidents to Tank Vessels.**

T/ALL (a) The licensed officer in command of any tankship shall report in writing and in person to the board of local inspectors nearest the port of first arrival any accident to said ship involving loss of life or damage to property to an approximate amount exceeding \$500 and shall also report in the same manner any casualty or loss of life from whatever cause of any person on board such vessel, and any stranding or grounding, whether or not any damage has been sustained by the vessel. If the accident happens upon the high seas or without the jurisdiction of inland waters, the board to whom the report is first made shall make the in-

vestigation, but if the accident occurs within the jurisdiction of inland waters the report shall be transmitted to the board within whose jurisdiction the accident occurred, which board shall make the investigation except in cases where, in the judgment of the Director, better results may be obtained by another board conducting the investigation, in which case the Director is authorized to direct such investigation by another board: *Provided*, That when from distance it may be inconvenient to report in person it may be done in writing only, and the report sworn to before any person authorized to administer oaths.

(b) Whenever a tank ship collides with a lightship, buoy, or other aid to navigation under the jurisdiction of the Bureau of Lighthouses, or is connected with any such collision, it shall be the duty of the licensed officer in command of such vessel to report the accident to the nearest board of local inspectors. When any collision of this character is reported to a board of local inspectors, those officers shall immediately transmit such information to the superintendent of Lighthouses of the district in which the collision occurred.

B/ALL (c) Whenever a tank barge in tow collides with a lightship, buoy, or other aid to navigation under the jurisdiction of the Bureau of Lighthouses, or is connected with any such collision, it shall be the duty of the person in command of the towing vessel to report the accident to the nearest board of local inspectors.

T/ALL (d) Failure to promptly render the reports required by this section shall be deemed sufficient cause for suspension or revocation of license.

(e) Whenever in an investigation of an accident to a vessel, made by a board of local inspectors, it is stated by the officers of the vessel concerned, or it is developed by the investigation, or it is stated in a report of an accident, that the accident was due to a collision with a light vessel, buoy, or other aid to navigation under the jurisdiction of the Lighthouse Service, or to any fault of any such aid, or to the lack of such aid, the local inspectors investigating the case, or to whom the report was made, shall promptly report to the Commissioner of Lighthouses, through the supervising inspector of the district and the Director, on the form provided for the purpose, the location of the accident; the aid to navigation near or at which the accident occurred; the nature of the accident; the alleged cause of the accident; whether or not the accident was due to some alleged fault of the aid, either in its operation or location; the proposed improvement in the aid, if such has been suggested; and all other information or suggestions coming to them which would be of value to the Lighthouse Service. If an investigation was held, the findings of the board shall also be reported. Local inspectors shall also report in the same manner any other information or suggestions coming to them concerning the need of additional aids to navigation or the modification of any existing aids.

(f) Boards of local inspectors are authorized to call on the superintendent of Lighthouses of the district for any information concerning aids to navigation that will be useful in an investigation of an accident.

**SECTION V-3. ENGINE DEPARTMENT****V-3-1. Examination of Boilers and Machinery by Engineer.**

T/ALL It shall be the duty of an engineer when he assumes charge of the boilers and machinery of a tank ship to forthwith thoroughly examine the same, and if he finds any part thereof in bad condition, caused by neglect or inattention on the part of his predecessor, he shall immediately report the facts to the master, owner, or agent, and to the local inspectors of the district, who shall thereupon investigate the matter, and if the former engineer has been culpably derelict of his duty they shall suspend or revoke his license.

**V-3-2. Reports of Accidents, Repairs, and Unsafe Boilers and Machinery by Engineers.**

T/ALL (a) Before making repairs to a boiler of a tank ship the engineer in charge of such tankship shall report,



in writing, the nature of such repairs to the local inspectors of the district wherein such repairs are to be made.

(b) It shall be the duty of all engineers, when an accident occurs to the boilers or machinery in their charge tending to render the further use of such boilers or machinery unsafe, until repairs are made, or when, by reason of ordinary wear, such boilers or machinery have become unsafe, to report the same to the local inspectors immediately upon the arrival of the vessel at the first port reached subsequent to the accident or after the discovery of such unsafe condition by said engineer.

#### V-3-3. Requirements for Fuel Oil.

T/ALL (a) Oil to be used as fuel to be burned under boilers on tank ships subject to the jurisdiction of this Bureau shall have a flash point of not less than 150° F. (closed cup test).

(b) It shall be the duty of the chief engineer to make an entry in the log of each supply of fuel oil received on board, stating the quantity received, the name of the vendor, and the flash point (closed cup test) for which it is certified by the vendor.

(c) It shall be the further duty of the chief engineer to draw and seal at the time the supply is received on board, a half-pint sample of each lot of fuel oil, such sample to be preserved until that particular supply of oil is exhausted.

### SECTION V-4. GENERAL SAFETY RULES

#### V-4-1. Warning Signals and Signs.

TB/ALL (a) *Red Warning Signals.*—Red signals (flag by day and electric lantern at night) should be kept at hand for display during transfer of cargo.

(b) *Warning Sign at Gangway.*—Warning placards should be kept at hand for display while a vessel is fast to a dock and during transfer of cargo, to warn persons approaching the gangway. The placard shall state in letters not less than 2" high substantially as follows:

Warning.

No open lights.

No smoking.

No visitors.

(c) *Warning Sign in Radio Room.*—A sign shall be placed in radio room warning against the use of radio equipment during transfer of Grade A, B, C, or D liquids, except by permission of senior deck officer.

#### V-4-2. Matches and Smoking.

TB/ALL (a) *Matches.*—The use of other than safety matches is forbidden aboard tank vessels at all times.

(b) *Smoking.*—Smoking is forbidden on board a tank vessel except at such times and in such places as permitted by the captain or employee in charge. "No Smoking" signs shall be posted in appropriate places.

#### V-4-3. Cargo Tank Hatches and Ullage Holes.

TB/ALL No cargo tank hatch covers or ullage holes shall be opened or shall remain open without flame screens except under the supervision of the senior member of the crew on duty unless the tank opened is gas-free.

#### V-4-4. Non-Sparking Tools.

TB/ALL Non-sparking tools shall be provided for opening and closing cargo hatch covers.

#### V-4-5. Fresh Air Masks.

TB/ALL Tank vessels transporting Grade A, B, or C liquids, having any cargo tanks which exceed 15 feet in depth, measured from the hatch combing, shall be provided with fresh air or oxygen mask equipment, including belt and life line.

### SECTION V-5. CARGO HANDLING

#### V-5-1. Men on Duty.

TB/ALL (a) A sufficient number of the crew shall be on duty to perform transfer operations.

B/ALL (b) In the case of unmanned barges, a licensed deck officer or certificated special cargo man-tank vessel may be supplied by a terminal.

#### V-5-2. Electric Bonding.

T/ALL A tank vessel may be electrically connected to the shore piping, through which the cargo is to be transferred, prior to the connecting of a cargo hose. This electrical connection, if made, shall be maintained until after the cargo hose has been disconnected and any spillage has been removed.

#### V-5-3. Closing Scuppers and Sea Valves.

TB/ALL Deck officer in charge shall see that all scuppers are properly plugged during transfer operations except on tank vessels using water for deck cooling. Sea valves shall be closed and lashed or otherwise secured to indicate that they should not be opened before and during all cargo transfer operations.

#### V-5-4. Connecting Cargo Hose.

TB/ALL Sufficient hose shall be used to provide for movement of vessel. Gaskets shall be used in every hose joint and in couplings to pipe lines and where bolted flanged joints are used, a sufficient number of bolts shall be used to secure a tight connection. Under no circumstances shall less than three bolts be used in a bolted flanged coupling. When hose is supported by ship's tackle the senior deck officer on duty shall see that sufficient tackles are used. Pans or buckets shall be placed under hose connections.

#### V-5-5. Inspection Prior to Transfer of Cargo.

TB/ALL Prior to the transfer of cargo, the senior deck officer on duty, who shall be a licensed officer or a certificated special cargo man-tank vessel, shall inspect the vessel to assure himself that the following conditions exist:

(a) Warnings are displayed as required.

(b) No repair work in way of cargo spaces is being carried on without his permission.

(c) Cargo hose is connected and cargo valves are set.

(d) All cargo connections for the loading of Grade A, B, and C cargoes have been made to the vessel's pipe lines and not through open end hose in a hatch.

(e) In loading Grade A, B, and C cargoes, there are no fires or open flames present on the deck, or in any compartment which is located on, facing, open, and adjacent to that part of the deck on which cargo hose is connected.

(f) The shore terminal or the other tank vessel concerned has reported itself in readiness for transfer of cargo.

#### V-5-6. Approval to Start Transfer of Cargo.

When the senior deck officer on duty has assured himself that the requirements of V-5-5 have been met, he may give his approval to start operations.

#### V-5-7. Duties of Senior Deck Officer During Transfer Operations.

TB/ALL The senior deck officer on duty shall control the operations as follows:

(a) Supervise the operation of cargo system valves.

(b) Start transfer of cargo slowly.

(c) Observe hose and connections for leakage.

(d) Observe operating pressure on cargo system.

(e) Observe rate of loading for the purpose of avoiding overflow of tanks.

#### V-5-8. Conditions Under Which Transfer Operations Shall Not Be Commenced or If Started They Shall Be Discontinued.

TB/ALL Cargo transfer operations shall not be started or, if started, shall be discontinued under the following conditions:

(a) During severe electrical storms.

(b) If a fire occurs on the wharf or on the tanker or in the vicinity.

(c) If a tow boat comes directly alongside in way of cargo tanks of a tanker or tank barge which is loading Grade A, B, or C cargo.

#### V-5-9. Auxiliary Steam, or Electric Current.

B/R When transferring Grade A, B, or C products from one or more unmanned barges the towing vessel may furnish

steam or electric current for pumps on barges or dock, but in no case shall the cargo pass through or over the towing vessel.

#### V-5-10. Cargo Handling on Unmanned Tank Barges.

B/R The duties prescribed for officers and crew in Section V-5 shall, in the case of unmanned barges operating on inland waters tributary to the Gulf of Mexico, devolve upon the person or persons who in fact accomplish the operations described and who may not be members of the crew of the towing vessel.

#### V-5-11. Termination of Transfer Operations.

TB/ALL When transfer operations are completed the valves on hose connections on vessels shall be closed. The cargo hose shall be freed of cargo before being disconnected.

#### V-5-12. Transfer of Other Cargo or Stores.

TB/ALL Package Goods, freight, and ship's stores shall not be loaded or discharged during the loading of Grade A, B, or C products except by permission of the senior deck officer on duty. Explosives as cargo shall not be loaded or carried on any tank vessel containing Grade A, B, or C cargo.

#### V-5-13. Maintenance of Cargo Handling Equipment.

TB/ALL This equipment shall be maintained by the tank vessel's personnel in accordance with these regulations, including the following:

(a) Cargo Hose shall not be used in transfer operations in which the pressures are such that sweating or dripping of cargo occurs.

(b) Cargo Pump Relief Valves shall be tested at least once each year to determine that they function satisfactorily at the pressure at which they are set to open.

(c) Cargo Pump Pressure Gauge shall be tested at least once a year for accuracy.

(d) The cargo piping of all tank vessels shall be tested at least once each year for tightness.

#### V-5-14. Emergencies.

TB/ALL In case of emergencies involving the transfer of cargo or the gas-freeing of tanks nothing in these regulations shall be construed as preventing the senior deck officer present from pursuing the most effective action in his judgment for rectifying the conditions causing the emergency.

[Appendices A, B, and C, which are a part of the original document appear on pages 494-519]

J. B. WEAVER, Director.

[F. R. Doc. 751—Filed, May 26, 1936; 3:18 p. m.]

### INTERSTATE COMMERCE COMMISSION.

#### ORDER

At a Session of the Interstate Commerce Commission, Division 4, held at its office in Washington, D. C., on the 20th day of May A. D. 1936.

[Finance Docket No. 10714]

#### ALABAMA, TENNESSEE & NORTHERN RAILROAD CORPORATION REORGANIZATION

*It appearing*, That the Alabama, Tennessee & Northern Railroad Corporation has filed a petition in the District Court of the United States for the Southern District of Alabama, Southern Division, under the terms and provisions of section 77 of the act of July 1, 1898, entitled "An Act to Establish a Uniform System of Bankruptcy Throughout the United States", as amended; that the said court entered an order on December 14, 1934, approving the petition as properly filed under this section, and by order dated January 11, 1935, appointed John T. Cochrane permanent trustee of the debtor's property; and that the debtor has filed a plan of reorganization with the court and with this Commission:

*It is ordered*, That the proceeding be set down for public hearing before Examiner Harvey H. Wilkinson at the office

of the Commission, in the city of Washington, District of Columbia, at 10 o'clock in the forenoon on June 15, 1936; and that the secretary issue notice thereof and serve the same in the manner provided in the Rules of Practice upon the debtor, trustee, and trustees under mortgages on the debtor's property, and all parties who may have intervened in these proceedings before the Commission;

*It is further ordered*, That John T. Cochrane, trustee, shall publish once a week for two consecutive weeks the notice of hearing in the following newspapers:

Mobile Register,  
Washington County News,  
Choctaw Advocate,  
Sumter County Journal, and  
Pickens County Herald and West Alabamian;

*And it is further ordered*, That the said trustee shall mail copies of the notice of hearing to known bondholders, stockholders, and creditors, at the last-known post-office address or place of business of each.

By the Commission, division 4.

[SEAL]

GEORGE B. MCGINTY, Secretary.

[F. R. Doc. 749—Filed, May 26, 1936; 3:03 p. m.]

[Finance Docket No. 10714]

#### NOTICE OF HEARING

#### ALABAMA, TENNESSEE & NORTHERN RAILROAD CORPORATION REORGANIZATION

The above entitled proceeding is assigned for public hearing, under the provisions of section 77 of the Bankruptcy Act, as amended, on June 15, 1936, at 10 o'clock a. m., standard time, at the office of the Interstate Commerce Commission, Washington, D. C., before Examiner Harvey H. Wilkinson.

At the hearing evidence will be received in support of, and in opposition to, the debtor's plan of reorganization and any other plan which may be properly presented. Plans of reorganization may be filed at any time before, or upon cause shown during, the hearing, by the trustee, or by or on behalf of creditors being not less than 10 percentum in amount of any class of creditors, or by or on behalf of stockholders being not less than 10 percentum in amount of any such class, or with the consent of the Commission by any party in interest.

MAY 20, 1936.

[SEAL]

GEORGE B. MCGINTY, Secretary.

[F. R. Doc. 750—Filed, May 26, 1936; 3:03 p. m.]

### SECURITIES AND EXCHANGE COMMISSION.

#### United States of America—Before the Securities and Exchange Commission

At a regular session of the Securities and Exchange Commission held at its office in the city of Washington, D. C., on the 27th day of May A. D. 1936.

Commissioners: James M. Landis, Chairman; George C. Mathews, Robert E. Healy, J. D. Ross, William O. Douglas.

[File 32-19]

#### IN THE MATTER OF THE APPLICATION OF WISCONSIN POWER AND LIGHT COMPANY

#### ORDER AUTHORIZING HEARING AND DESIGNATING OFFICER TO CONDUCT PROCEEDINGS

An application having been duly filed with this Commission, by Wisconsin Power and Light Company, pursuant to Section 6 (b) of the Public Utility Holding Company Act of 1935, for an exemption from the provisions of Section 6 (a) of said Act of the issue and deposit as collateral security by applicant of \$1,100,000 principle amount of First Lien and Refunding 5% Gold Bonds, Series G, of applicant, said bonds to be dated July 1, 1931, to mature July 1, 1961, and to bear interest at the rate of 5% per annum, it being stated in said

application that said bonds so to be issued are to be deposited as collateral to secure a loan of \$1,100,000, the proceeds of which loan will be used solely for the purpose of financing the business of applicant; and that said bonds will not be issued unless applicant first receives an order from the Public Service Commission of Wisconsin authorizing the issue of said bonds and the deposit of the same as collateral security as aforesaid;

It is ordered, that the matter be set down for hearing on May 29, 1936, at ten o'clock in the forenoon of that day, at Room 1101, Securities and Exchange Building, 1778 Pennsylvania Avenue NW., Washington, D. C.; and

It is further ordered, that Charles S. Moore, an officer of the Commission, be and he hereby is designated to preside at such hearing, and authorized to adjourn said hearing from time to time, to administer oaths and affirmations, subpoena witnesses, compel their attendance, take evidence, and require the production of any books, papers, correspondence, memoranda, or other records deemed relevant or material to the inquiry, and to perform all other duties in connection therewith authorized by law.

Upon the completion of the taking of testimony in this matter, the officer conducting said hearing is directed to close the hearing and make his report to the Commission.

By the Commission.

[SEAL]

FRANCIS P. BRASSOR, Secretary.

[F. R. Doc. 755—Filed, May 27, 1936; 12:19 p. m.]

*United States of America—Before the Securities and Exchange Commission*

At a regular session of the Securities and Exchange Commission, held at its office in the City of Washington, D. C., on the 26th day of May 1936.

Commissioners: James M. Landis, Chairman; George C. Mathews, Robert E. Healy, J. D. Ross, William O. Douglas.

IN THE MATTER OF CHARLES C. WILLSON, PETITIONER, 507 WOODWARD BUILDING, WASHINGTON, D. C.

ORDER VACATING ORDER REFUSING REGISTRATION

Charles C. Willson, on December 16, 1935, having filed with the Commission an application for registration as a broker and/or dealer under Rule MA2 of the Commission's rules regulating over-the-counter markets; and the Commission on April 2, 1936, having refused the said registration pursuant to Rule MA4 of the rules aforesaid; and

The said Charles C. Willson, on May 18, 1936, having filed with the Commission a petition for reconsideration of the matter and praying that the order of April 2, 1936, aforesaid be vacated; and the Commission having duly reconsidered the matter and being fully advised in the premises;

It is ordered that the said petition of Charles C. Willson be and the same is hereby granted.

It is further ordered that the order of January 18, 1936, postponing the registration of Charles C. Willson as a broker and/or dealer in the over-the-counter markets be and the same is hereby vacated.

It is further ordered that the order of April 2, 1936, refusing the registration of Charles C. Willson as a broker and/or dealer in the over-the-counter markets be and the same is hereby vacated.

By the Commission.

[SEAL]

FRANCIS P. BRASSOR, Secretary.

[F. R. Doc. 756—Filed, May 27, 1936; 12:19 p. m.]

*United States of America—Before the Securities and Exchange Commission*

At a regular session of the Securities and Exchange Commission, held at its office in the City of Washington, D. C., on the 23rd day of May 1936.

Commissioners: James M. Landis, Chairman; George C. Mathews, Robert E. Healy, J. D. Ross, William O. Douglas.

IN THE MATTER OF INDUSTRIAL ENGINEERING COMPANY, 802 SHIPLEY STREET, WILMINGTON, DELAWARE

ORDER REFUSING REGISTRATION PURSUANT TO RULE MA4

The registration of Industrial Engineering Company as a broker or dealer on over-the-counter markets having come on for hearing before the Commission upon the question of refusal or postponement pursuant to Rule MA4; and the Commission having entered its findings of fact in the matter, and being of the opinion that it is necessary and appropriate in the public interest and for the protection of investors to refuse the said registration;

It is ordered, pursuant to Rule MA4, that the registration of Industrial Engineering Company as broker or dealer transacting business on over-the-counter markets, be and the same is hereby refused.

By the Commission.

[SEAL]

FRANCIS P. BRASSOR, Secretary.

[F. R. Doc. 757—Filed, May 27, 1936; 12:19 p. m.]

Friday, May 29, 1936

No. 55

PRESIDENT OF THE UNITED STATES

EXECUTIVE ORDER

AMENDMENT TO TARIFF OF UNITED STATES CONSULAR FEES

By virtue of and pursuant to the authority vested in me by section 1745 of the Revised Statutes and in accordance with section 7 of the act of April 5, 1906, ch. 1366, 34 Stat. 101, section 2 of the act of June 4, 1920, ch. 223, 41 Stat. 750, and sections 2 (h) and 7 (h) of the Immigration Act of 1924, approved May 26, 1924, ch. 190, 43 Stat. 153, item 9 of the Tariff of United States Consular Fees is hereby amended to read as follows:

9. Visa services for aliens.

Immigration visa:

Furnishing and verifying application for immigration visa ..... \$1.00

Issue of immigration visa ..... 9.00

Passport visa (the term "passport visa" refers to the visa of a passport or other travel document including a Chinese certificate):  
Preparation of application for passport visa and administering oath, except where the fee has been reciprocally reduced or abolished under the authority of the act of February 25, 1925 (43 Stat. 976) ..... 1.00

Granting of passport visa, except where the fee has been reciprocally reduced or abolished under the authority of the act of February 25, 1925 (43 Stat. 976) ..... 9.00

(Note: Under the provisions of section 2 of the act of June 4, 1920 (41 Stat. 750-751), no fee for the application or for the visa of the passport shall be collected from any officer of any foreign government, or members of his immediate family, its armed forces, or of any State, district, or municipality thereof.)

Transit certificate:

Preparation of application and administering of oath ..... No fee

Granting of transit certificate ..... No fee

Visa of alien crew list ..... \$2.00

Supplemental visa of alien crew list ..... No fee

FRANKLIN D. ROOSEVELT

THE WHITE HOUSE,

May 26, 1936.

[No. 7379]

[F. R. Doc. 760—Filed, May 27, 1936; 2:34 p. m.]